THE OLD SAVAGE IN THE NEW CIVILIZATION

by RAYMOND B. FOSDICK

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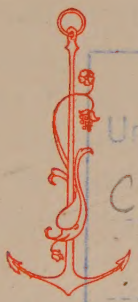
in
THE NEW CIVILIZATION

BY

RAYMOND B. FOSDICK



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"..... a naked Polynesian parading in a top hat and spats"
J. A. HOBSON

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EVANGELICAL
SCHOOL OF THEOLOGY

GARDEN CITY, NEW YORK
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1929

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FOREWORD

THE chapters in this book were prepared for college audiences. Four were commencement addresses given at Wellesley College, Colgate University, Vanderbilt University, and the University of Iowa. One was the Founders' Day address at Mount Holyoke; another was given before the Institute of Arts and Sciences of Columbia University; while the basis of still another was a convocation address at the University of Virginia. Part of the material, also, has been presented in addresses at Colorado College, the University of Georgia, the University of Nebraska, and the University of Kansas.

Prepared in the midst of a busy professional life, and making no claim to originality or any special research, these addresses have, with few modifications, been left practically as they were delivered—bearing, I have no doubt, many marks of the spoken style. The thread of unity that holds them together is the single theme with which they deal: the new civilization into which modern ma-

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chinery has plunged us and the struggle of mankind to keep abreast of it. Can the old savage be trusted with the tools which he has created?

I am conscious, of course, that the book, as it now stands, begins with a question and ends with a question. I have no competence to answer it, and my sole excuse for putting these addresses into printed form is the same hope that I had when I first prepared them for student audiences: that they might stimulate thinking on the most challenging problem that confronts our generation: *What use are we going to make of our new machinery?*

It is possible that by some of its readers this book will be classified as part of the current "literature of despair." It is not written in any such spirit, and I have myself little liking for the pessimistic approach to any problem. But optimism or pessimism have properly no more to do with our attitude toward contemporary civilization than they have with the attitude of medical scientists toward cancer. It is facts and trends that must be sought, and these can be found only by fearless questioning. At a time when the gap between change and adjustment has been as suddenly widened as it has been in our generation such ques-

tioning would seem more intelligent than the complacency and indifference exhibited by those Roman citizens of the Fourth Century A. D. whom Gibbon describes as "accepting as normal occurrences the indications of disease and dissolution which to more prudent minds would have brought clear warning."

R. B. F.

61 Broadway,
New York City.
July, 1928.

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THE OLD SAVAGE IN THE NEW CIVILIZATION

Chapter I

THE NEW CIVILIZATION

> "I cannot say that I am in the slightest degree impressed by your bigness, or your material resources, as such. Size is not grandeur, and territory does not make a nation. The great issue, about which hangs a true sublimity and the terror of overhanging fate, is what are you going to do with all these things."
>
> —THOMAS HUXLEY
> (at Johns Hopkins 1876).

A LITTLE more than a century ago, when our great-grandfathers were discussing the death of Napoleon at St. Helena and our grandfathers were babes in arms, Harvard College graduated the class of 1822 with sixty members. The commencement address was given by the Reverend John Kirkland, and it was as dreary as commencement addresses invariably are. It contained all the

wise counsel and pious admonition which age habitually gives to youth and which youth habitually disregards. But in the middle of that address the Reverend Mr. Kirkland said a rather startling thing. He referred to the world into which the sixty Harvard seniors were about to step as "a *complex* world." He seemed to infer that the simplicity of older days was gone, and that life had become an involved and bewildering process. This, of course, has always been to some extent the reaction of old age. Life seems to speed up because age is slowing down. But with all allowances for this natural change in pace, it seems strange, particularly from the standpoint of today, that the world of 1822 should have seemed to anybody to be complex.

For what was the world like in 1822? In all America, in all Europe, there was not a railroad, nor a telephone, nor a telegraph. The steamboat was just beginning to win its way. Travel was a painful and precarious undertaking, with the result that most people stayed home, living and dying where they were born. Students at Harvard College living at some distance came by way of the stagecoach or on horseback. From Providence to Boston was a two days' journey when the roads

were good, and they were generally bad. From Boston to New York took five days. When Samuel Morse, the painter and inventor, tried to get from Washington, D. C., to New Haven, Connecticut, to the bedside of his dying wife, it took him seven days. Some of the difficulties experienced by members of Congress in getting to the capital are described in the following letter: "Burke was shipwrecked off the Capes; Jackson and Mathews with great difficulty landed at Cape May and travelled one hundred and sixty miles in a wagon to the city; Burke got here in the same way. Gerry and Partridge were overset in the stage; the first had his head broke . . . the other had his ribs sadly bruised . . . Tucker had a dreadful passage of sixteen days with perpetual storms." [1] * From one month to three months elapsed before European news reached the United States, and the battle of New Orleans with all its savage slaughter was fought in ignorance of the fact that more than two weeks before, peace had been signed between England and America in the city of Ghent in Belgium.

The world of 1822 had other differences. There

* The References will be found at the end of the book.

were no electric lights, no sewing machines, no bathtubs, no furnaces, no hot-water faucets, no asphalt or macadam pavement, no plumbing, no sewer systems—in fact, none of the conveniences which have become an accepted part of our life to-day. In 1822 James Monroe was President of the United States. When, with the light of a candle, he signed the message embodying the Monroe Doctrine, he used a quill pen, because steel pens—to say nothing of fountain pens—had not been invented. There was no such thing as a blotter, so he sprinkled his signature with sand to dry it. His world was a world without matches, gas or coal ranges, victrolas, elevators, refrigerators, canned food, ice-cream freezers, rubber goods of all kinds, parcels post, money orders, bicycles, cigarettes, typewriters, or alarm clocks.

In those days only a small proportion of the population lived in cities. The farm and village housed the rest. The factory system had only just developed—in connection with weaving and spinning—and the home was still the unit and centre of most of the industrial arts. People lived for the most part simply and quietly, engaged in a routine of work from which, in generations, there had been but little variation. Indeed, from the days

of Rameses II and Moses down to the days of the Reverend Mr. Kirkland and our grandfathers, amazingly few fundamental changes occurred in the material existence of common people. The physical factors of life were practically stereotyped. Transportation and communication were no more rapid a century ago, when the Reverend Mr. Kirkland was exhorting the sixty Harvard seniors, than they were with the ancient Egyptians. Nothing swifter than a horse was known to either Nebuchadnezzar or Thomas Jefferson. A letter sent by Napoleon from Paris to Rome took as long to deliver as one sent by Julius Caesar from Rome to Paris. The farmers in the United States in 1822 used largely the same methods and the same instruments that were used in the days of Augustus.

And this was only a hundred years ago. We are not discussing ancient history; we are discussing conditions of life in the days of our grandfathers and great-grandfathers.

* * *

But there were other differences between those days and these. When Mr. Kirkland made his commencement address, Charles Darwin was only

thirteen years old, and the whole foundation of modern biology and modern philosophy as well was yet to be laid. Agassiz was fifteen years old, Sir Charles Lyell was twenty-five years old, and the crude geological conceptions of Linnæus and Lamarck were still in vogue. In the general field of chemistry and physics, Michael Faraday was just beginning his work. In the field of medicine, Jenner was still alive, and his idea of vaccination against smallpox was slowly winning its way. Lord Lister and Louis Pasteur were not yet born, and anæsthetics and antiseptic surgery were unknown to the world. In the realm of astronomy, Pierre Laplace, who originated the nebular hypothesis, was still alive, while J. C. Adams, his successor in the field of mathematical astronomy, was only three years old. Many of the subjects which are to-day commonplace in college curriculums were unheard of. There was no such thing as experimental psychology, for example, and the word "sociology" did not exist in the English language. The average college curriculum of 1822 consisted principally of Latin, Greek, and mathematics, sweetened with a dash of what was called "natural philosophy," and accompanied by liberal doses of the theology of Jonathan Edwards.

This, then, is what the world was like in 1822, when the Reverend John Kirkland called it complex. It was a world that was rubbing its eyes in the presence of new forces. If that world seemed complex to the sixty Harvard seniors of the class of 1822, what does the present world seem to us!

For between that time and this, between the days of our grandfathers and ourselves, has occurred the mightiest revolution in history. It has completely changed the whole complexion of human life. It has fundamentally altered our daily habits; it has not only modified our environment, but has thoroughly revolutionized it; it has split the anciently established order into a thousand fragments. Since the days of Assyria and Babylon—indeed, since the days of our Neolithic forefathers—nothing has occurred which has so completely and in so short a time changed the method and manner of living of the human race, as the mechanical revolution of the Nineteenth Century. Our great-grandparents would find themselves far more at home in the world of the Venerable Bede or of Alfred the Great than they would in the world we occupy to-day.

With the advent of steam and electricity we have minimized the difficulties of time and dis-

tance. When Napoleon was retreating in headlong fashion from Moscow, it took him 312 hours to complete the last leg of his journey from Vilna to Paris. Any traveller can now do it in less than forty-eight hours by railroad or in eight hours by airplane. We cross the ocean in five days, where a century ago the trip averaged two months. We fly by airplane from one city to another, from one country to another, in a few hours' time. Our fast mails go by airplane. In our automobiles we pass from state to state and see in a day more than our grandfathers could have covered in a month. By cable and wireless we are in immediate and constant touch with the far corners of the earth. We talk easily to our friends a thousand miles away. Seated in our own libraries we hear concerts and lectures that are hurled to us through the air from two thousand miles or more away. We hear Galli Curci and Sembrich in our own homes, and Caruso returns from the dead to sing to us. Events that few could witness are brought to the whole human race on the celluloid film: we see the King of England walk through Westminster Abbey to lay a wreath on the tomb of the unknown soldier, and we see and hear the President of the United States speaking in Arlington Cemetery.

The scientific revolution has done a thousand other things. It has given us not only new commodities but new substances. We juggle with the atoms of carbon and hydrogen, and create materials that Nature herself has not formed. We make carborundum and acetylene gas and celluloid and hundreds of other compounds, which we use in our daily lives. What we formerly obtained from plants and animals we now manufacture. We make dyes and medicines from coal tar; we extract sugar from beets; we make perfume out of garbage, and foodstuffs out of sewage. From corn we take a hundred useful products ranging all the way from salad oil for our tables to the erasers on our pencils. Luxuries that were formerly the monopoly of the privileged few are now the common property of everybody. Medicines such as a prince could not have had a century ago are now at hand to cure the pauper. Vegetables and fruits, exotic and out of season, are upon our dinner tables. Our daily food is brought from China, from the West Indies, and from the far islands of the Pacific. The royal purple of the ancients, and dyes far more beautiful than they knew, are now to be had on the bargain counter.

* * *

The scientific revolution has not only added to our conveniences, it has altered our methods of living. Our populations are no longer predominantly rural. They live in huge cities, crowded together in communities such as the world never knew before. The day of individual work, for one's own needs, in one's own way, and in one's own time, has gone. Instead, men work in vast factories, engaged on minute contributions to the finished article. Hundreds of thousands of men work underground, digging the coal to feed the monster industrial machine. Millions of men, women, and children toil anxiously to keep it going, and the whole system is so inconceivably intricate and so closely articulated that dislocation in one part of it affects all the rest, and industrial cohesiveness has come to be a more essential factor in the world than political cohesiveness.

For example, we cannot have clothes without a cotton mill; we cannot have a cotton mill without machinery; we cannot have machinery without steel; we cannot have steel without iron; we cannot smelt iron without coal; we cannot have coal without railroads to bring it to us; we cannot have railroads without involving a hundred occupations and enterprises. Civilization has, in fact,

become a great machine, the wheels of which must be kept turning or the people starve. For millions of human beings it is a vast treadmill, worked by weary feet to grind the corn that makes the bread that gives them strength to walk the treadmill.

And with it all has come the speeding up of life, and the spirit of hurry and worry such as our grandfathers with all their lack of conveniences never dreamed of. The human race lives by schedule, according to a stereotyped routine. Our machinery determines where we shall live and how we shall live; we rise, eat, go to work, rest, toil, and sleep again at its bidding. Life has become more and more a standardized process, in which there is little of serenity or of leisure. We hurry from birth to death, goaded only to greater haste by our increasingly speedy conveyances, trying to catch up with the machinery which we have ourselves created. Truly this is a complex world. The sixty Harvard seniors of the class of 1822 would stand aghast at our hectic civilization. Instead of a rural, agricultural, individualist society, they would find a society that is urban, industrialized and regimented. Instead of an era classical in its tastes and static in its ideas of progress, they would find one that is scientific and mobile. To them the

life that men lived under the Roman Caesars with its horses, oxen, carts, and domestic hand labour would be more intelligible than would our life now with its airplanes, its automobiles, its radios, and its mass production.

With the increase of machinery has come the increase of human knowledge. Rather it is the increase of knowledge that has made all these inventions possible. For the scientific revolution of the Nineteenth Century was born of a great intellectual curiosity and a new technique. When Bacon first emphasized the importance of the experimental method as an approach to human knowledge, he was sowing the seed which began to develop to its full fruition in the days of our grandfathers. The old accepted facts of nature were tested and analyzed. Nature herself was put on the witness stand, and experiment was the interrogating counsel. All the phenomena of life, whether pertaining to the body, the brain, or the soul, were haled for examination before the court. Under the stimulus of this method, we have pushed back the boundaries of human knowledge far beyond where they were a century ago. In biology, in surgery, in medicine, in physics, chemistry, astronomy, and in a dozen other

sciences, we have wrenched the facts from nature by a process of cross-examination which would not be denied. As the inquiries have become more detailed and complicated, new sciences have been added to the list. The body of knowledge has developed bewilderingly. The long-hidden secrets of life are slowly becoming ours. We have traced man back to the Tertiary Period, and we are reaching long fingers of inquiry into the universe of which we form so minute a part, and beyond this universe into other universes, where life and intelligence may exist, far transcending our tiny comprehension. We are almost intoxicated with the new knowledge. We stand on tiptoe before each new promise of discovery, eagerly awaiting its outcome. The telescope, the microscope, the spectroscope, are daily bringing us information that leaves us gasping; and we are stunned by the realization that in this thirsty search for knowledge we are just at the beginning of the way. Ahead of us lies a long, rising road, with ever-broadening outlooks on either side.

This is the kind of complexity into which we have been born. It is conceivable that a hundred years ago a man might acquire and digest a fairly substantial proportion of the body of human

knowledge. At least he could easily find a point of orientation from which he could intelligently survey the course and keep up with the progress of the march. To-day this is utterly impossible. In the growing intricacy of knowledge one can scarcely find his way. Whole groups of conclusions must be accepted without analysis or examination, and most of the departments of learning we cannot even enter. Our college graduates scarcely touch the garment's hem of human knowledge. If they obtain the scantiest outline, or a point of view, or a method of approach, they get all that any college can hope to give to its students.

* * *

Our long analysis leads to one conclusion. Comparatively speaking, when those sixty Harvard seniors stepped out into the world a hundred years ago they faced a simple task and simple responsibilities. The environment of their lives was easily understood and controlled. The problems of daily existence were reasonably adapted to their capacities. We, on the other hand, are projected into a world so complex, into an environment so baffling, that few individuals can understand it all and fewer still can control it. We are tested with bur-

dens in a way our grandfathers never were tested. We must carry responsibilities that would have broken the backs of our forebears a century ago. We are called upon for a degree of intelligence far higher and more accurate than was necessary before automobiles and railroad trains took the place of horses and stagecoaches.

Consider an illustration from the field of government. Government a hundred years ago was a comparatively simple affair. It dealt with matters that were easily within the scope of the average man's intelligence. In its practical aspects there was little that was technical about it. Locally it had to do with good roads, water supply, common lands, and other matters which could readily be considered in town meeting and upon which the least intelligent could have an opinion that might be valuable. Even in its national aspect government was not complex. There were few technical bureaus and those that existed did not affect the daily lives of the citizens. There was no problem of transportation, because there were no railroads; there was no perilous conflict between capital and labour, because there were no machines, no mass production, and no specialization of industry. The scope of government in those days was largely

negative. It was built around the principle of *thou shalt not* and was based on simple moralities which appealed to the understanding and reason of the average man.

But those days are gone. The scientific revolution has wiped them out as completely as if they had never existed. Government has become infinitely complex and technical. It has to do for the most part with matters which are far beyond the intelligence of the average citizen. It deals with complicated bond issues, with subtle transportation problems, with involved plans of taxation and tariff, with technical educational projects, and with a hundred other matters, which directly affect our lives and happiness, and in regard to which we are called upon to express our opinion as citizens. Consequently, the breach between the citizenship and its government is widening as science increases the intricacy of its operations. Our elections, many of them, are fought out on the basis of issues about which the voters have no intelligent conception whatsoever, nor could a majority of them acquire such a conception even if there were time and machinery for their education. Even in my time as a city official in New York I have seen the function of government increase in elaborate-

ness until now there are few people who really understand all its technical complications. Government is getting out of the hands of the people, not in the sense that anybody is taking it away from them, but in the sense that with the rapid extension of its technical aspects it is becoming more and more difficult to comprehend and control.

* * *

At this point we often make an erroneous assumption. We assume that man's capacity keeps up with his inventions. We assume that, as civilization becomes great, the human stock which is building it also becomes great; that by some alchemy or other there is a rise in individual capacity from generation to generation to match the increasing complexity of our physical environment. We take it for granted that there is some sure inhibition that prevents men from creating machines which they cannot control; and that the very fact that they have created them is proof of their ability to manage them.

But this is not the fact. Knowledge may mean power, but it does not necessarily mean capacity. We cannot be dogmatically sure that there has been substantial improvement in the human stock

since the days of the Egyptians or the Greeks. The men who laboured with their hands to build Cheops's pyramid probably had wit enough and intelligence enough to use a steam hoist and a concrete-mixer if these inventions had been given to them. Tutankhamen, brought up at Windsor Castle, would doubtless act like any other prince of the blood. Even less sure can we be that this last century which has added so tremendously to our mechanical environment has brought a corresponding improvement in human capacity. In fact, we know it is not true. Men were no less able in the days of Washington and Hamilton, and Channing and Fox, than they are to-day. We have come into our new inheritance with no greater abilities than our grandfathers had. The difference between the Harvard class of 1822 and any graduating class to-day lies not in their respective capacities, but in the loads which those capacities must bear.

In this field of government, therefore, our task is to control complex functions like subways and street railroad financing with the same intelligence that was adapted to the spade and the blacksmith shop. (Our environment is becoming more and more involved, but the tools of control remain largely the same.)

How faulty those tools may be we are only now beginning to realize. Here in America we have always thought of our own people as possessing a peculiar degree of training and intelligence. But the statistics of the United States Commissioner of Education are disillusioning. Only 3 per cent. of our vast population have ever attended a college or professional school.[2] Two thirds of the American people never get beyond elementary school. Indeed 17 per cent. of the children of the United States never get beyond the fifth grade.[3] What this means in its practical results was shown by the statistics gathered from our army during the war, when for the first time we had the opportunity of testing the intelligence of a substantial cross section of our people. Of the white draft—that is, the white soldiers as opposed to Negroes—30 per cent. were found to be unable to read and understand newspapers or to write letters home. Sixty-six and two-thirds per cent. of the white draft tested below a percentage that marked the minimum capacity necessary to carry on the so-called paper work of the army—that is, making reports and keeping the files. Out of all those millions of drafted men just a third had ability enough to

carry on this by no means laborious type of mental work.

Professor H. L. Hollingworth of Columbia University has recently been making some extensive measurements of the "average man" in America.[4] Here is his portrait: He leaves school at the eighth grade with a working knowledge of the "fundamentals," a smattering of local geography, a bit of history, and a few elementary facts of physiology. He has no general knowledge of civics, science, politics, or literature. He is able to speak one language only and never develops the intelligence required for satisfactory high-school work. When given intelligence tests of the standardized sort, his rating does not significantly exceed that which would be made by average adolescents at their fourteenth year. After a short period of industrial training he may become a plumber, a carpenter, a policeman, a mechanic. He has a vocabulary of about seventy-five hundred words, a little more than half that of the ordinary high-school graduate. He marries at a relatively early age and has a family of from three to five children. He is credulous to a marked degree and inclined to superstition.

The significance of these facts it is impossible

to avoid. They cannot be explained away. If the theory of democracy has any validity or promise, these products of the elementary school, these average men and women, are the people upon whom our complex life will place increasing responsibilities. These are the human tools through which we fondly hope that all this unintelligible machinery of civilization may somehow or other be intelligently controlled.

* * *

Humanity stands to-day in a position of unique peril. An unanswered question is written across the future: Is man to be the master of the civilization he has created, or is he to be its victim? Can he control the forces which he has himself let loose? Will this intricate machinery which he has built up and this vast body of knowledge which he has appropriated be the servant of the race, or will it be a Frankenstein monster that will slay its own maker? In brief, has man the capacity to keep up with his own machines?

This is the supreme question before us. All other problems that confront us are merely its corollaries. And the necessity of a right answer is perhaps more immediate than we realize. For

science is not standing still. In speaking of the scientific revolution I have not been speaking of a phenomenon that was confined to the Nineteenth Century. Rather we are just at the beginning of the revolution. We could not stop it if we would. It is advancing by leaps and bounds, gaining in impetus with each year. It is giving us more machines, faster machines, machines increasingly more intricate and complex. In the Seventeenth Century Sir Thomas Browne wrote: "It is too late to be ambitious. The great mutations of the world are acted." Not long ago the New York *Times* made the following statement in a full-page advertisement: "When Peary reached the Pole in 1909, after twenty-three years of effort, it took five months to get the news to New York. Now Commander Byrd flies to the Pole in a few hours, and the story of this occurrence of yesterday is in the New York *Times* to-day."

Life in the future will be speeded up infinitely beyond the present. Sources of energy will be tapped and harnessed far outrivalling what we have to-day. There lies in full view before us a realm of discovery in physical science till now untrodden by mortals even in their dreams. The pioneers are already upon the road to this promised

land. In California at the present moment a combined attack, financed and equipped on a huge scale, is being launched on the problem of the structure of matter; and the same search is being eagerly prosecuted in laboratories all over the world. We now know that in atoms of matter there exists a store of energy incomparably more abundant and powerful than any over which we have thus far obtained control. If once we can liberate this force, what machines we can build! Steam and electricity will be an anachronism at which our children will laugh as we laugh at the hand loom and the spinning wheel. With a pound weight of this radioactive substance we will get as much energy as we now obtain from 150 tons of coal. Or another pound weight can be made to do the work of 150 tons of dynamite.

One hundred and fifty tons of dynamite—enough to blow a modern city into oblivion—compressed to a pound weight which might be held in the hand! No wonder that a sober-thinking scientist like Professor Frederick Soddy of Oxford University should write: "I trust this discovery will not be made until it is clearly understood what is involved." "And yet," he goes on to say, "it is a discovery that is sooner or later bound to

come. Conceivably it might be made to-morrow."[5]

One has only to turn the pages back to 1914 to find the grounds for Professor Soddy's uneasiness. All the machines that ingenuity could invent were directed to the single purpose of human destruction. In a hundred laboratories, in a thousand arsenals, factories, and bureaus, physics and chemistry were harnessed to the task of mass death. The gigantic success of the enterprise is shown in the statistics: 10,000,000 known dead soldiers; 3,000,000 presumed dead soldiers; 13,000,000 dead civilians; 20,000,000 wounded; 3,000,000 prisoners; 9,000,000 war orphans; 5,000,000 war widows; 10,000,000 refugees.

This was the tabulation that our mechanical civilization made possible. This is the result of creating machinery for which we have no method of control. This is the consequence of giving children matches to play with. The former British Secretary of War, Winston Churchill, sums up the situation in these sombre paragraphs:

"It is established that nations who believe their life is at stake will not be restrained from using any means to secure their existence. It is probable—nay, certain—that among the means which will next time be at their disposal will be

agencies and processes of destruction wholesale, unlimited, and perhaps, once launched, uncontrollable.

"Mankind has never been in this position before. Without having improved appreciably in virtue or enjoying wiser guidance, it has got into its hands for the first time the tools by which it can unfailingly accomplish its own extermination. That is the point in human destinies to which all the glories and toils of men have at last led them. Death stands at attention, obedient, expectant, ready to serve, ready to shear away the peoples *en masse;* ready, if called on, to pulverize without hope of repair what is left of civilization. He awaits only the word of command. He awaits it from a frail, bewildered being, long his victim, now—for one occasion only—his Master." [6]

This, then, is the problem: science will not wait for man to catch up. It does not hold itself responsible for the morals or capacities of its human employers. It gives us a fire engine with which to throw water to extinguish a fire; if we want to use the engine to throw kerosene on the fire, that is our lookout. The engine is adapted to both purposes. With the same hand, science gives us X-rays and machine guns, modern surgery and high explosives, anæsthetics and poison gas. In brief, science has multiplied man's physical powers ten thousand fold and in like ratio has increased his capacity both for construction and destruction. How is that capacity to be used in the future? How can we hold in check the increasing physical

power of disruptive influences? Have we spiritual assets enough to counterbalance the new forces? How can we breed a greater average intelligence? Can education run fast enough, not only to overcome the lead which science has obtained, but to keep abreast in the race? Can the old savage be trusted with the new civilization which he has created?

* * *

These are ugly questions. They are hurled as a challenge at our generation, and upon their answers the future depends. What the answers are no intelligent person pretends to know. We are wandering in heartbreaking perplexity, swamped by the paraphernalia of living, weighed down by mountains of facts, trying to find some sure path out of this jungle of machinery and untamed powers, some principle of synthesis that will afford a way of escape. And the tragedy of it all is that there was a time when we thought we knew the answers to the riddles that this modern life of ours was propounding. Up until 1914 most of us were fairly confident of the result, fairly easy about the future. We had entered the Twentieth Century imbued with the complacent philosophy of Her-

bert Spencer. Evolution was the method by which man was reaching perfection. We thought we could discern "the dim outlines of a gigantic plan; no accidents, no chance, but everywhere order and completeness." We talked glibly of the direction and goal of the human pilgrimage and of the bright prospects of the race. We assumed that there was an automatic law of progress and that the trend was always upward. We quoted John Fiske and Frederic Harrison in support of the principle that "always toward perfection runs the mighty movement."

And then came 1914 and the years of uncertainty and reappraisal that have followed since 1918. They have given us a perspective we did not have before. We realize now that evolution may mean retrogression as well as progression, and that there is little in the past to encourage millennial anticipations. We realize that the "accumulated wisdom of the ages" has proved inadequate in managing our new estate. We see the abyss upon the edge of which the race is immediately standing. We see the inevitable doom that lies ahead unless we can achieve a measure of social control far greater than any which we have hitherto exercised. Disillusionment as to himself is creeping in upon

the Twentieth Century man as upon his shoulders falls the weary weight of all this unintelligible world. As Lord Bryce expressed it in his arresting phrase: "Another ice age may be settling down upon the human mind."

But our disillusionment has not led to despair. We have not reached the stage where in Huxley's words we would "welcome a kindly comet to sweep the whole affair away." Rather our age is marked by a determination through some means or other to speed up the development of the social controls, to bring men ethically and morally abreast of their own machines. But how this can be done nobody knows. Instinctively we turn to education as a way of hope. But education for what? What kind of education? All the diplomats of Europe whose manœuverings in the dark resulted in the Great War were educated men. Poincaré graduated with high honours from the University of Paris; Sazonov was a distinguished student at the Alexandrovsky Lycée; Bethmann-Hollweg studied at the universities of Strassburg, Leipzig and Berlin; Lord Grey graduated from Balliol College, Oxford. Before them for a generation their diplomatic predecessors had been similarly the products of the lycée, the gymnasium,

and the university. It was not the uneducated and illiterate who brought on the cataclysm of 1914. The men whose hands guided civilization to the brink of the precipice had had every advantage that our modern educational agencies could give. Obviously something is wrong with our present system of education. Certainly the conventional type of schooling, with its respect for tradition and its ill-placed confidence in existing institutions, will get us nowhere. The world has need of education far beyond our possibilities of obtaining it, but not of the kind that has brought us to our present pass.

(And after education, what?) Frankly, we do not know. In the confused councils of this generation many things are being advocated. There are those who claim that the environmental attack upon which we have put such emphasis cannot possibly succeed, and that the only hope of the future lies in improving the quality of the human stock by the introduction of better strains. Consequently, the science of eugenics is attracting ever wider attention. There are others who claim that the hope of the world does not lie in democracy—because the complications of civilization make mass verdict of value only in the simpler issues—but lies

rather in an aristocracy of leadership, recruited from all classes of society on the basis of merit. There are still others who look for social control only in a fundamental reorganization of human society, with the purpose of revising the attitude of men toward wealth production and distribution. Still others are looking for a solution in social coöperation—if only it can be brought about—not only as between individuals within a class, but as between classes within a nation and nations within a league. Again, there are many who believe that the spirit of Christianity contains the key to the solution of this great crisis, if only that spirit can be practically applied. How this is to be done in comprehensive fashion, or whether in our race with catastrophe we have time for this slow approach, nobody knows, and we are frankly dismayed as we see the long lead which in two thousand years our professions have gained over our practices.

In brief, our generation has no single answer to the riddles which our machine civilization is asking. There is no unanimity of opinion; indeed very little coherence of opinion. Like those who built the Tower of Babel in the land of Shinar, we are smitten with many tongues and many counsels.

But one thing is probably true: the questions with which our generation is confronted cannot complacently be left to time to answer. Our fate may overtake us while we are still admiring the slow processes of history. The world cannot count on geological ages for the development of its social sense. Man has become in a new and unexpected degree the moulder of his own future, and there is an imminence about that future from which he cannot wriggle away. To drift without question of goal, or to steer our course by old reckonings which have not recently been checked, is to court a disaster perhaps without parallel. Now as never before we need creative intelligence—knowledge consciously applied to our problem—the same kind of fearless engineering in the social field that in the realm of physical science has pushed out so widely the boundaries of human understanding. Now as never before we must depend upon our universities for leadership. Perhaps they are turning out men and women—one or two here and there—upon whose foreheads there is no standardized hall mark of the educational process, one or two who have broken away from the authority of established ideas—some unrecognized Darwin,

some undiscovered Newton, some unknown Pasteur—to set a new course for human advance.

Here lies the hope of the future. With such high-visioned and creative leadership we can conquer the most powerful creatures with which man has ever had to contend—creatures which he himself fashioned and set free: his own machines. Without such leadership, or with a timid, uninformed following behind it, all the gains of the mechanical age are illusory, and like the brontosaurs of the Triassic Period that developed a protective armour so heavy that they bogged themselves in the mud, man will be mired by the weight of his own inventions.

Chapter II

THE OLD SAVAGE AT THE HELM

> "Men fear thought as they fear nothing else on earth."
>
> —Bertrand Russell.

It was the war that brought all these questions to the front. We knew of course that physics and chemistry had given us a new heaven and a new earth, but it scarcely occurred to us that the whole thing might get out of control. For a generation our machine civilization had plunged along the track with little misgiving on the part of the passengers as to the safety of the route or the capacity of science as the engineer. And then suddenly the World War flashed the red light of a danger signal across the track, and ever since we have been asking anxious questions of each other, peering around the curves ahead to see what the difficulty might be. We have not stopped the engine, and science is still at the throttle, and the pace is un-

checked. But the passengers are uneasy, and apprehension is beginning to spread that the train may not really be under control.

Stated in more accurate terms, the question that confronts our generation is whether or not our shifting physical environment has outrun our capacity for adaptation. Is human society being gorged with innovations too great for its powers of assimilation? Are there limits to our ability to absorb alteration and change? If the pace were not so swift, if history were moving with more deliberate steps, biology would have a ready answer to these questions. There is no fixed status for any environment, and the survival of any organism depends upon its inherent capacity to adapt itself to shifting conditions. But we are living in an age in which overwhelming transformations of environment are taking place overnight. It is not the *fact* of change; it is the *rate* of change that constitutes the danger. The overrapid alteration of artificial environment may annihilate mankind no less certainly than the overrapid modification of natural environment wiped out the sabre-toothed tiger and the mastodon.

If the advance in the last three generations had been more symmetrical, the quandary in which

mankind is now placed would not be so marked. But the progress has been almost exclusively along the line of the natural sciences. Physics, chemistry, and biology are the triple kings before whose thrones we worship, the three wise men out of the East whose gifts we eagerly accept. The social sciences, on the other hand, have advanced scarcely at all. In the knowledge of man, of his natural equipment and impulses, of his relations to his fellow man, and of the regulation of human intercourse in the interests of harmony, we are still untouched by any Renaissance. As James Harvey Robinson points out, Aristotle's treatises on astronomy and physics, and his notions of "generation and decay" and of chemical processes, have long since gone by the board, but his politics and ethics are still revered.

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It is this gap between the brilliant development of scientific knowledge on the one hand and the almost stationary position of our knowledge of man on the other that constitutes the danger. We have utilized our growing acquaintance with the laws of nature to harness new forces and transform the physical world about us, but the scientific study

of the human being, of the springs of his conduct, and of human relations has not been pushed with anything like the same eagerness and with little of the same technique. In spite of his new weapons and of his increased powers, man himself remains as he was and always has been—irrational, impulsive, emotional, inherently conservative to change, bound by customs and traditions which he will not analyze, the victim of age-old conventions and prejudices. Except for a certain urbanity, the good nature and good temper of the herd, modern man is probably not far removed from his paleolithic ancestors. Kept normally in control by the pressure of social institutions, he is easily tempted to throw off the restraint, and all that is cruel or credulous or destructive in his inheritance wells up like a fountain of wine to intoxicate him. The temporary absence of the police force of the city of Boston means pillage and rioting. The emotional outbreak of the Ku Klux Klan is accompanied by burnings and whippings. A great wave of passion sweeps the earth, and fifteen million of our young men are slain or maimed in a war in which one atrocity marches upon the heels of another and all that is base and brutal in mankind is glorified and sanctified.

This divergence between the natural sciences and the social sciences, between machinery and control, between the kingdom of this world and the kingdom of the spirit—this is where the hazard lies. Science has exposed the paleolithic savage, masquerading in modern dress, to a sudden shift of environment which threatens to unbalance his brain. It has given him power and weapons which the utmost wisdom could scarcely be trusted to use aright. Human arrangements have suddenly ceased to be fool-proof. In the words of Professor Schiller of Oxford, the race stands dismayed at the prospect of the old savage passions running amok in the full panoply of civilization.

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It is this ominous view that causes so many people to wish that the train could be stopped, that the engineer could be induced to take his hand from the throttle, that the natural sciences would stay their progress until the social controls catch up. But it is an idle wish. The train will not stop. Rather, with every year that goes by, its speed is increasing at a faster and faster rate. The throttle is wide open and our machine civilization is plunging ahead toward an unknown destination.

We have scarcely begun the ride. Physics and chemistry have hardly had an opportunity to show us what speed and change really mean.

In other words, we are merely at the beginning of progress in the physical sciences. We are entering upon a revolution in our environment far more radical than that through which we have just come. The possibilities of communication through wireless, the harnessing of new energy, the increase in horsepower available for each nation and community and person—it is in connection with such projects as these that our material surroundings will again and again be transformed. It is probable that the next fifty years will alter the lives of our children far more completely than the last one hundred years have altered our own.

No, we cannot halt the advance of science. Man has set his hand to this furrow and he will not stop until he comes to its end. Never before has he been seized with so feverish a preoccupation, with such a frenzy of desire. A vast conspiracy is afoot to wrench from Nature all the secrets which she still conceals. This common purpose overflows the boundary lines of nations and constitutes the outstanding element of cohesiveness in Western civ-

ilization. The plan of attack is being developed on an international basis. The scientists of one nation are seeking light in the laboratories of another. Niels Bohr at Copenhagen and Rutherford at Cambridge and Onnes at Leyden—to mention only a few—are attracting the research workers from a dozen foreign countries. A German biologist goes to Rovigno in Italy to study marine biology; a Dutch crystallographer goes to the Royal Institution in London; an Englishman, studying the potentials of gases, is sent to Göttingen to continue the same line of research. The recent reports of the International Education Board throw new light upon the situation: from all over the world investigators in paleobiology, mathematical physics, astrophysics, pure mathematics, plant physiology, and other subjects of scientific importance, are migrating to the laboratories best adapted to their purposes. It is a world-wide movement that we are witnessing, a definitely planned advance into the unknown. Suggestions and discoveries originating in far separated countries are being brought together to obtain results that no one could have predicted or imagined. It is like an elaborate picture puzzle, over which many heads

are bending, where each tries to fit some intricate shape into the growing unity of the figure.

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With the allegiance of our age and generation so completely committed to the natural sciences, we must face the fact that the social mechanism can be kept from cracking under the strain only as we develop the sciences that relate to man. Unless we can marshal behind such studies as economics, political science, and sociology the same enthusiasm, the same approach, and something of the same technique that characterize our treatment of physics and chemistry; unless the results of this research can be applied to human life as freely and boldly as we apply the natural sciences to modify our methods of living; unless we can free ourselves of prejudice and stale custom and harness intelligence to the task of straightening out the relations of man with his fellow men and promoting an intercourse of harmony and fairness—unless, in brief, in our generation we can make some appreciable progress toward this goal of social control, then pessimism has the better of the argument, and the chances of our keeping the train on the track are exceedingly slight.

"But the social sciences are already well matured," it will be said, "and every year adds to their followers and adherents. There is not a college in the country in whose curriculum they do not appear. Psychology, economics, anthropology, ethnology, sociology, and political science are competing for the favour of students in nearly every university in the land, and, although the experimental method is not readily applicable in studying mankind and its problems, research in all these fields is being widely developed."

The truth of this statement no one can challenge. The aims and something of the mood of physics and chemistry are beginning to influence these newer sciences of man. Although the subject matter is far more intricate and unmanageable, here and there an attempt is being made to carry over to the social sciences the inductive technique and quantitative method of the natural sciences. At many points research into human nature, human beliefs, and human institutions is being eagerly promoted. Within the last few years a system of international fellowships in the social sciences has been organized on a comprehensive basis. In brief, there are far more thought and energy devoted to the social sciences to-day than

was dreamed of a generation ago, or even fifteen years ago, and in so far as these sciences are beginning to subject human affairs to critical analysis and reconsideration, they are registering a real advance.

But social science to-day is still lacking in the fundamental groundwork of knowledge. It is still too largely based upon inspiration rather than upon facts. Consequently, social reform gropes in the dark where it should walk with assurance. It is as though engineers were at work without an adequate development of physics, or as though physicians were practicing in the absence of chemistry and biology. So much of social science, too, is what Professor Robinson calls "an orderly presentation of the conventional proprieties," a timid and uncritical acceptance of beliefs and customs that have long since lost their value to mankind, if even they had it, a rationalization of old prejudices and ancient mistakes and tribal taboos whose roots are buried deep in antiquity. Moreover, even when after long experiment and patient research the social sciences come to some conclusion that is capable of immediate realization in reshaping the practical relationships of men, this

conclusion is not adopted or is most grudgingly adopted. Man is so lethargic, so suspicious of innovation in everything that relates to himself, that only with difficulty can he be persuaded to desert any fraction of his inherited practices and routine.

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It is here that we face the extraordinary contrast between our willingness to make any change whatever in our physical environment that convenience or well-being may prescribe, and our obstinate determination to leave unaltered as far as we can our relations both to the world and to each other. We eagerly apply to our methods of living the conclusions of the natural sciences; we scorn to apply the conclusions of the social sciences. For example, physics gives us the theory of the internal combustion engine, or sets before us the principles of communication by electricity. With what feverish activity do we seize upon these ideas! They are elaborated and refined, and with a thousand minds working upon them, they are brought to such a state of completion that soon we soar through the skies in airplanes and talk to our

friends a thousand miles away. Nobody stops to ask what Isaac Newton, two hundred years ago, would have thought of these innovations. Nobody questions their propriety because they do not happen to follow the theories of Michael Faraday. Nobody allows old ideas of gas engines or outworn conceptions of electricity to interfere with the application of these new principles. Nobody tries to impede their development by appeals to emotion, or by attacking the motives or character of the inventors. We are thirsty for progress, impatient of delay, in all that relates to the material phases of our lives.

But let economics and political science develop the principle that the world we live in is an economic unit and that the process of integration and interrelationships has developed to a point where some international machinery like a league of nations is necessary to handle the common interests of mankind that overflow national boundaries—what happens? We begin to ask what George Washington would have thought of it one hundred and twenty-five years ago. We quote the casual remarks of statesmen long in their graves. We summon the ghosts of tradition and ancient cus-

tom to bear witness to the fact that the thing has never been done before. We criticize the mistakes and impugn the character of the chief inventor and his associates. We fight over the matter in political campaigns in which prejudice and passion take the place of intelligent analysis. For the detachment of the laboratory we substitute the emotion of the torchlight procession.

Illustrations of this kind could be multiplied at length. The accepted conclusions of the social sciences are always made to run the gauntlet of tradition and prejudice. The forces of the established order are marshalled in full array against change. It makes no difference how necessary the change may be, how essential to the vitality and life of the social order; its foes remain implacable. Whether it be in the field of eugenics in an attempt to breed a better race, or in economics in an endeavour to distribute more fairly the rewards of industry, or in law through the establishment of a new international court, the response is invariably the same. We raise our hands to invoke the sanctity of old customs and glorify the god of things as they are. We condemn the man who dares to preach a new way of life, a new method of sal-

vation for the race. "He perverteth the people," we cry. "Crucify him!"

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But it must not be forgotten, of course, that three hundred years ago this same Calvary awaited the prophets of the natural sciences. Galileo, Giordano Bruno, Francis Bacon, Descartes—these were the pioneers, the early saints of the Kingdom of Truth, by whose integrity we are free. All the social forces of their time were arrayed against them. Bruno was burned at the stake; Descartes in terror suppressed his own books; and Galileo, under duress, knelt before ten scarlet-clad cardinals of the Church to amend the solar system which he had disarranged. Religion, respectability, morality, and the sanctity of old ideas were all invoked to stop the pernicious spread of the new science. For three hundred years the battle was waged—the Three Hundred Years' War for intellectual freedom in relation to the natural sciences. Only by dint of sacrificial devotion was the war won. Harvey, Newton, Buffon, Sir Charles Lyell, Darwin, Huxley—these were the gallant souls who dared to break with the past; the heretics of their generation, who faced the invective

and misrepresentation that are invariably levelled against the proponents of new ideas. When Huxley, in 1860, with crushing argument demolished the complacent conservatism of Bishop Wilberforce, the war ended, and the freedom of the human mind to follow wherever the facts of natural science may lead was vindicated. Only in some provincial sections of the United States is there any lingering idea that the war is not yet over. Occasionally, as in Tennessee, some guerrilla action is started, some sniping on the part of isolated stragglers who still wear the uniform of the old cause and have not yet caught up with the news that their army was definitely and finally put to rout nearly seventy-five years ago.

But the war is not over as far as the freedom of the social sciences is concerned. Rather it has just begun. Any attempt to bring to bear on human affairs the same critical analysis that we apply to electrons or glands or the stellar spaces is met with angry opposition. We regard a new idea as a kind of social impropriety. We insist that the sun goes around the earth, not because it means very much to us, but because we shrink instinctively from contact with new conceptions. We cling to the past with pathetic insistence. On every hand it

dominates and controls us. We are governed by the traditions and impulses of a bygone world. Innovation in social institutions and economic ideas frightens us. We find comfort in the status quo. We form private organizations to guard the social order from change and to enforce conformity to commonly accepted standards. We group ourselves into societies to revere the past, and we decree that history shall lay no impious hand upon our forefathers. We even construe patriotism to mean a love of things as they are, a blind devotion to the present régime. Much of our education is directed toward this same traditionalism: justifying the existing notions of human conduct, strengthening the force of inherited habits, instilling the belief that our laws and institutions necessarily contain permanent qualities of reality.

As for the prophets of new and critical ideas, particularly in the social and economic field, our inclination is to classify them among the enemies of society. They are radicals, they are Reds, they are dangerous men; they are tampering with the foundations of order; they dare to subject to scrutiny and analysis the institutions and customs which we have received as a sacred trust from the past. We therefore try to excommunicate them from

the society of responsible and respectable men; we threaten them with compulsion and suppression; on occasion we throw them out of our colleges and universities. The Church and the legal profession, backed by the business interests, are peculiarly intemperate in their condemnation. Particularly here in the United States, in the midst of this present era of conservatism, the whole pressure of social opinion is exerted to make everybody conform to a given standard of ideas, to suppress innovations, to force the heretic to kneel before the scarlet-clad cardinals of the social order in penance for his sins.

* * *

Our long analysis leads to one conclusion. We are living in a world that is utterly different from any world that has existed before. Modern science has suddenly compressed the planet we occupy—jamming together into a single community widely diverse peoples and civilizations. On top of this confusion, with prodigal gesture, science has scattered weapons of destruction far more deadly than bewildered man ever before possessed; so that, suddenly armed to the teeth, he is asked to live in peace, crowded together with neighbours

whom he never knew before and for whom he has no particular liking. And all this has happened in a hundred years, happened so quickly, in fact, that it finds the race utterly unprepared in point of religion, ethics, law, philosophy, economics, politics, and government to meet the exigencies that have arisen.

This is the challenge that we face in our generation. It is a challenge the answer to which cannot be postponed. That answer calls for boldness, for a spirit of daring, for a certain scorn of the past, for a fearless facing of present facts. It involves the analysis and reconsideration of the worth and utility of human institutions and practices. It means a fundamental reappraisal of things that have hitherto been regarded as more or less sacrosanct. It calls for an atmosphere of hospitality to new ideas, of openmindedness to the work of those pioneers who are digging in the almost unexplored fields of the social sciences. In brief, it requires a public opinion, conscious of the growing disproportion of civilization, eager to encourage creative work in the sphere of human relationships. Surely if our colleges and universities are to play an effective part in the great drama of this generation, it will be by instilling into their stu-

dents, as the coming leaders of public opinion, a spirit of adventurous liberalism, an eagerness for truth wherever it may be found, a willingness to follow facts wherever they may lead. Huxley's advice might well be the guiding principle of any graduating class that walks out into the world in this generation: "Sit down before fact as a little child; be prepared to give up any preconceived notion; follow humbly wherein and to whatever abysses nature leads, or you shall learn nothing."

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But what are these social institutions and ideas that require analysis and restatement? We can mention only a few. Surely in any list of them the current conception of patriotism would stand well at the top. For it was patriotism that brought on the last war—the patriotism of the Germans and the patriotism of the French and the patriotism of the thirty other nations on both sides of the battle line, each driven by a passionate love of country, each believing it was fighting for liberty and civilization. Never in history have men been so willing to die that the nation of their allegiance might live. And what was the result of all this sacrificial heroism? The bankruptcy of nations, a civiliza-

tion that was well-nigh wrecked, victors indistinguishable from the vanquished, both sides involved in one common cataclysm of ruin. What is this thing we call patriotism? Once a sacred flame upon the altar, it has grown into a conflagration of devastating proportions. Once a noble passion that broke down local provincialisms and stretched the mind to broader loyalties, to-day, with the expansion of international life, its tendency is to narrow rather than widen the sympathies of men. Once the issue was patriotism versus a small parochialism; now the issue is between patriotism and the enlarging fellowship of human life on the planet. Once patriotism was a unifying force that brought order among small conflicting groups; to-day, in the world-wide society of mankind it has become a disintegrating force.

In this word patriotism, therefore, we have a conception that needs critical analysis and reappraisal. Here is an opportunity for the integrity and detachment of the laboratory. Here is a chance to dissect from a great human virtue the malevolent growth that is devouring it—the hundred-per-cent. Americanism, the flag-waving nationalism and all the tribal self-infatuation and arrogance that mask behind man's instinct for

loyalty. Here is a chance, too, to write upon the pages of the future those poignant words which the countrymen of Edith Cavell so tardily inscribed upon her monument in London: "This I would say, standing as I do in view of God and eternity, I realize that patriotism is not enough. I must have no hatred or bitterness toward any one."

But "patriotism" is not the only catchword that requires reëxamination. We are all of us the unconscious victims of phrases and slogans that have been invested with a certain undefined sanctity. We use them as a substitute for thinking. They serve as a respectable screen for dogmatism, prejudice, or vacuity. Our generation needs a thorough mental house-cleaning of all these symbols; we need to reappraise them in the light of fresh knowledge and experience and find out what they involve. Sometimes they are inherited from another generation, and we mouth them without knowing that their significance is changed or dead. Often they represent a pack emotion, some battle cry of long ago that served its purpose and should be forgotten. Generally they are thought of as distilled truth put up in capsules, wisdom concentrated and simplified for easy consumption. Al-

ways they have the ring of infallibility and are regarded as the ultimate axioms.

"Democracy" is one of these unanalyzed catchwords. We are not quite sure what it means, and certainly it does not mean to us what it meant to our fathers. But with all its vagueness and indefiniteness it is a sacred word, a magic measuring rod by which we attempt to appraise the political and social events about us. To be "democratic" is to be in line with the shining American tradition; to be "undemocratic" is to be outside the pale. "The cure for the evils of democracy is more democracy"—with what high devotion have we chanted this refrain! But what does it involve? And how applicable is it to the intricate, regimented civilization in which we live to-day?

So, too, we speak of "the faith of the fathers." But which fathers and what faith? As President Hopkins of Dartmouth has said, it was the faith of the fathers that forced the hemlock on Socrates and nailed Christ to the cross. Certainly it was the faith of the fathers that hanged witches in Salem and whipped Quakers through the streets of Boston. It was the faith of the fathers that closed libraries and art museums on Sundays, called Darwin harsh names, and passed laws forbidding the

teaching of evolution. To-day it is the faith of the fathers that is invoked in support of a cramped and narrow nationalism, in rewriting history text-books in the interests not of accuracy but of tradition, and in discouraging free discussion of topics that from a patriotic or moral standpoint seem dangerous. The faith of the fathers! Yes, but not when it is stagnant.

Similarly we speak of "the wisdom of the ages," and "the accepted findings of mankind." But nothing that binds the minds of men ought to be unquestionably accepted. Ideas and institutions are made by man for man—made to be altered or discarded if proved inadequate. The old authoritarianism has clashed with the new knowledge and the new spirit of science. Change has become too obvious. Our young people face an unknown future. We dare not pretend that the old solutions and the old formulas will suffice for them. We need, therefore, to find out what is involved in such a catch phrase as "the accepted findings of mankind." What findings? Accepted by whom? Accepted when? And under what tests?

Thus we could go down the long list of phrases and slogans that inhibit thought. "National honour," "All men are created free and equal,"

"Americanism," "Liberty," "The sovereignty of the state," "Thrift is power," "Proven by the test of time," "The sanctity of property," "Less government in business, more business in government," "The dignity of labour"—how refreshing it would be if all these words and phrases could be cleared up in our own thinking, if by analysis and reëxamination we could find out what they mean to us and what present values they involve! Certainly here is a worthy task for the new science.

* * *

One final conception that certainly should come in for rigid analysis is the validity and worth of our present economic order. Surely in this field, if in any, we need detachment and an open mind. For industry has upset the scale of human values. It has unbalanced men's dreams of a better world and their conception of the springs of action. It has become not one element in life, but the whole of life; not the servant of social purpose, but its master. Under our present régime man seems scarcely more than a tool for producing goods. He seems to exist not in order that he may be happy, but in order that machines may be prolific. Certainly our emphasis upon the economic side of

life, our preoccupation with the physical means by which we live, has become a universal malady that has robbed us of balance and perspective. Mr. R. H. Tawney, the English economist, has expressed this point of view perhaps more vividly than anyone else: "The burden of our civilization," he says, "is not merely, as many suppose, that the product of industry is ill-distributed, or its conduct tyrannical, or its operation interrupted by embittered disagreements. It is that industry itself has come to hold a position of exclusive predominance among human interests, which no single interest, and least of all the provision of the material means of existence, is fit to occupy. Like a hypochondriac who is so absorbed in the processes of his own digestion that he goes to his grave before he has begun to live, industrialized communities neglect the very objects for which it is worth while to acquire riches in their feverish preoccupation with the means by which riches can be acquired." [1]

Here in America this comment finds more forcible illustration, perhaps, than in any other country in the world. Nowhere else is business so openly the ruling passion; nowhere else is its fascination so universal and so exclusive. "A large

part of America's industrial success," says Ramsay Muir, "is due to the fact that the nation as a whole regards wealth-making as the highest form of human activity, so that industry engrosses, in a passionate concentration, nearly all the best minds of the nation." [2]

Here, then, is an institution, built upon the assumption of permanency, that is calling for scrutiny and review. Industry was made for man, not man for industry. Here is a chance for the social sciences to help readjust the balance, to work out the basis of a new perspective, to free us from the shackles of a system that robs life of so much of its meaning, its dignity, and its possibility of beauty.

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In these three illustrations—the conception of patriotism, the current catch phrases in our thinking, and the development of industry—I have tried merely to suggest the kind of opportunity that is awaiting the technique and the scrutiny of the new science. As a matter of fact, the derangement of human affairs is so extensive and our whole civilization is relatively so undeveloped that bewildering opportunities await on every hand. Every human idea and institution must be prepared to

meet the challenge of facts, to face the measurement of truth and worth. Our views of property, our conceptions of government, our systems of education, our churches, our laws, our philosophies, our notions of right and wrong, our conventional relationships with each other—these are legitimate subjects of analysis, the laboratory materials of the new inquiry. There is no refuge where a human institution can escape questioning. No longer can the world build sanctuaries for the protection of ideas.

This is the hour for what we have called adventurous liberalism. The social sciences can be developed only in an atmosphere of intellectual hospitality. The new Renaissance can come only as we help to pave the way. The social props by which we hope to shore up our overbalanced civilization can be erected only as we allow the builders room for their work. We are not called upon to adopt all the new ideas that will be developed. Many of them will ultimately be proved wrong. We are asked rather for a sympathetic attitude toward the creative purposes out of which the ideas come. We are asked to give the ideas free play. "The best test of truth," says Mr. Justice Holmes, "is the power of the thought to get itself

accepted in the competition of the market." "What he [the ordinary moral man] means by toleration," says Bernard Shaw, "is toleration of doctrines that he considers enlightened, and, by liberty, liberty to do what he considers right; that is, he does not mean toleration or liberty at all; for there is no need to tolerate what appears enlightened or to claim liberty to do what most people consider right." [3]

If we are to develop a genuine attitude of toleration, a real ability to face the search for truth with fearless eyes, then we must be prepared, as the new light comes, to shake off the respectable lethargy of old ideas, to free ourselves from the old forms that have narrowed and conventionalized our thinking. Kilpatrick tells us that an American Indian tribe has been found with a ceremonial song, the words of which have ceased to be understood, because under pressure of circumstances, the old language has given way to a new one. But still around the council fire the meaningless words are chanted.[4] What greater enterprise do we show in cutting loose from such entanglements of the past, from the dead things that cling about our feet?

We need not fear that we shall progress too fast. The overwhelming danger is that we shall not be able to progress fast enough. There is plenty of conservatism in the world to adjust the balance if it is needed. Mankind is instinctively conservative. Maeterlinck's observation is profoundly true: at every crossway on the road that leads to the future each progressive spirit is opposed by a thousand men appointed to guard the past. The least that the most timid of us can do is not to add to the immense dead weight that nature drags along. What we need in our time is not a brake for the chariot of progress but motive power. The ship of destiny has ballast enough; it needs sails. It is not the past toward which our eyes should be bending, it is the future; and it is in terms of the future that we should dare to think.

In the year 1600 Giordano Bruno was burned at the stake in Rome by the Inquisition. His crime was his endeavour to see the world as it really is, unclouded by the mists of authority and tradition. Nearly three hundred years later, in 1889, the City of Rome built a monument to his memory on the spot where his ashes rest. It stands in the Campo di Fiori where the peasants come to sell their flowers, and there the passer-by can

read this inscription: "Raised to Giordano Bruno by the generation which he foresaw."

Our business is not to look behind, but to look ahead along the road over which mankind is moving. The future has more significance than the past, in that it calls to action while the past is silent. The past cannot be altered, the future is plastic. For the past we have no moral concern, for the future we are responsible. "We are still the heirs of all the ages that have gone, but we are no less truly the ancestors of all the ages that are to come."

Chapter III

THE MACHINE AND STANDARDIZATION

> "I wholly disapprove of what you say and will defend to the death your right to say it."
>
> —VOLTAIRE to HELVETIUS.

THE year 1776 was one of history's great turning points. It was marked by three events of almost immeasurable consequence: the Declaration of Independence which opened a new chapter in the philosophy and practice of government; the publication of Adam Smith's *Wealth of Nations* which laid the foundations of a new economics; but chiefly, the invention by a man named Wilkinson of a cylinder that made Watt's new steam engine really work. It was this cylinder that changed the course of history and the destiny of man. The Age of Machinery stood beckoning on the threshold, and the human race walked into a

revolution the termination of which we cannot foresee and the consequences of which we do not know how to measure.

For beginning with Watt's steam engine we have pressed excitedly from one invention to another, harnessing new forces to ever new mechanical appliances. In the first eagerness of our pursuit we did not know that we were following a one-way path along which there could be no retreat. Only within more recent years, as the machine process has fastened itself on every detail of our lives, have we sensed the difficulties into which we have so unwittingly wandered. We know now that we are not completely the masters of the machines we have created. Their pulsations we can control, but their consequences control us. They have risen like living things to dominate our entire civilization. They have called into being hundreds of millions of people who otherwise would not have been born. For these hundreds of millions they are the sole means of existence. Stop the machines and half the people in the world would perish in a month.

Modern industry has become a mechanical circle: we create machinery in order to increase production, only to find that increased produc-

tion involves the necessity of creating more machinery. We produce in order that we may consume—and discover that we must consume in order that we may produce. In other words, the machine process has become both the means and the object of life. We are trapped by our own inventions. Our machinery seems almost to be endowed with a soul—a vindictive life within itself: we must tend it or it will turn and rend us. The penalty of neglect is death.

It is this inescapable necessity of keeping the machines going that constitutes the great problem of modern economic life. Idle machines mean starvation to the millions of people whom they have brought into the world; active machines mean a surplus of goods beyond the immediate capacity of the race to consume. To this dilemma but one answer has been found: we have kept the machines going, and we have done it by whipping up the demand for their products, by stimulating new desires, by creating new wants. Our problem has become not how to make things but how to dispose of them; not how to produce goods but how to produce customers; not how to develop output but how to intensify consumption. Consumption must constantly keep ahead of production; the

appetite for more things of every kind must be constantly stimulated. One desire must be used to breed another, and these new wants in turn must be fed and nourished so that other new wants may be born. As the editor of a New York newspaper recently remarked, the citizen's first importance to his country is no longer that of citizen but that of consumer. Thrift, which our fathers prized as one of the marks of wisdom, has become a virtue of doubtful social and economic value. If we would survive we must buy. "No matter how much the consumer who can afford to buy may resist," says Ralph Borsodi, "he must be made to eat more, to wear out more clothes, to take more drugs, to blow out more tires. He must consume, consume, consume, so that our industries may produce, produce, produce."[1] Says Garet Garrett: "To consume more and more progressively—to be able to say in the evening: 'I have consumed more to-day than I consumed yesterday'—this now is a duty the individual owes to industrial society."[2]

Out of this solution of the dilemma with which the machine has confronted us have come all the phenomena of modern business: the pursuit of the buyer; the new science of advertising; the revolu-

tionary methods in salesmanship involving the creation not only of new ways of wanting but of new habits of comfort and luxury; the cheapening of goods by mass production and distribution; the extension of credit systems; the development of new markets; the exploitation of backward races in an attempt to whet new appetites; and, finally the struggle of rival imperialisms for new territories in which to sell.

* * *

By this necessity of disposing of the surplus product of the machine the life of our age is shaped and dominated. It motivates our political thinking and is the chief factor in controlling our social institutions. It gives rise to what is fast becoming the outstanding characteristic of our time—the standardization of life, the stereotyping of possessions and environment in terms of fixed moulds. For if people are to be made to want what they have not wanted before, if sales are to be stimulated, goods must be cheap in price, and cheapness cannot be had without quantity production. The greater the quantity, the lower the cost. But quantity production makes no allowance for variation. The machine must be adjusted to turn out

units that are exactly alike. The Ford machines in Detroit and elsewhere stamp out more than 2,000,000 automobiles a year, more than 6,000 a day, but within their types there is no difference between them. A single watch factory in the United States produces 1,260,000 watches annually, and they are always the same. One shoe manufacturer in New England turns out 4,000,000 pairs every year, that vary only by sizes. Cloth that comes from a given loom must be of one width, one colour, and one texture; to vary these factors would add to the cost and thus discourage sales. Quantity production is necessary to keep the machine going, and the price of quantity production is the standardization of the product.

Toward this goal of standardization modern industrial methods are driving with determination. Standardization has indeed become one of the chief bulwarks of our economic life. It has been carried into every branch of industry. In the interests of economy we have standardized the sizes of bricks and blackboards and blankets. We have standardized the types and sizes of beds and mattresses and hotel chinaware. We have standardized bolts and nuts and milk bottles and bed springs. The Department of Commerce is engaged

in an effort to hasten the pace and widen the approach toward standardization, and commissions and committees, specially formed for that purpose, are now at work. Standardization is in the air. It even extends to standardized divorce laws and standardized building and plumbing codes.

How far this standardization has gone in altering the age-old habits and environment of mankind a moment's reflection will show. Indeed, it has world-wide implications. It touches human life everywhere. One sees with a feeling of dismay English caps adorning the heads of Chinese throughout their vast country. One sees them wearing European shoes and smoking European cigarettes. What has happened is that by artificial stimulation the Chinese have been made to want something, the lack of which they have not previously appreciated. In order to keep the wheels moving in European factories, these new desires have been arbitrarily created. Similarly Oriental civilization is rapidly taking to European clothing —so that we may look forward to seeing at least the masculine world arrayed in costumes which may possess a limited utilitarian value, but little else. So, too, the nations of the world are using the same breakfast foods, the same shaving soaps

and the same agricultural machinery. One hears the same music ground out from the same records by the same type of victrola in New York, Johannesburg, Calcutta, or Tahiti. Douglas Fairbanks, Charlie Chaplin, and the whole host of lesser notables are to be seen from Greenland to the south tip of New Zealand. If bathroom fixtures, ice cream sodas, and elevators represent an American contribution to the cultural life of mankind, then we can honestly say that our influence is spanning the world. No matter into what remote region he may travel, an American can scarcely get away from his own civilization. Even in out-of-the-way villages where the language is unfamiliar and the roofs are still thatched it follows him like a spectre, screaming of sewing machines, typewriters, collars, canned soups, cosmetics, and the products of five-and-ten-cent stores.

All around the world the habits and possessions of men are shaking down to fixed, common levels. In a country like the United States the process is even more pronounced. From east to west we eat the same kinds of food, wear the same styles of clothes, and live in the same types of houses or apartments. A hotel menu in San Francisco is exactly like a hotel menu in New York, just as

the suburbs of Portland, Oregon, look like the suburbs of Boston, Massachusetts, and the furniture and household utensils in New Orleans are identical with the furniture and household utensils in Minneapolis. The material side of life in America is fast developing a sameness, a uniformity, a monotony without parallel in history over so wide a geographical area. Quantity production, advertising, and the new methods of communication and transportation which modern machinery has created are breaking down the differences which hitherto have made of civilization a garment of many colours.

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But it is not alone on the material side of life that standardization is developing. Out of this environmental uniformity is coming a spiritual and intellectual uniformity of far greater significance. Common physical surroundings and possessions seem invariably to foster common mental reactions. There is something about mass production and distribution of goods that suggests mass production and distribution of ideas. If standardization works in one field, why is it not applicable in another? If men have the same types of automobiles

and food and furniture, why should they not have the same beliefs? If it promotes efficiency for men to dress alike and act alike, why does it not promote efficiency for men to think alike?

Whether or not there is a deliberate, conscious analogy between these two fields, certainly the same machine processes that have been employed in the one can be and are being employed in the other. The condition of our press furnishes an excellent illustration. The telegraph, the telephone, the wireless, the expensive up-keep of high-power machinery, the necessities of quantity production, are revolutionizing the business of disseminating news. As one travels from east to west across the continent, picking up the local newspapers at the various stations where one stops, one realizes how far the processes of standardization have gone in enforcing a uniformity of taste and thought—the same comic strips, the same political cartoons, the same advice to the lovelorn, the same success hints, the same sermons, the same pictures, inspirational messages, recipes, health talks, and feature stories. More than all this froth, there are the same identically worded news items, syndicated from the same central point. Similarly, there are syndicated editorials on a great variety

of topics, so that the whole country can hear the same thunder of applause or condemnation. If the papers are Republican in point of view, a common editorial emanating from Washington extols the virtues of the administration. If the papers are Democratic in persuasion, an editorial coming from the same city views with alarm the degenerate trend of events. From New York to San Francisco one cannot escape from syndicated opinion. On all sides there is the pressure for standardized thinking.

It is not only through the press, but through inventions like the radio that this development is being accentuated. Audiences of five and ten million people listening to the same voice are now almost daily phenomena. One station is linked with another, and the political, social, or moral ideas of one man travel with the speed of lightning from ocean to ocean, impressing their force with all the persuasive authority of the spoken word. And this single invention is merely in its infancy. The entire world will soon be linked together, so that the voices and opinions of men will search out the remote hiding places of the earth.

What is happening is that our machines—our power presses, our radios, our telephones, our tele-

graphs—are creating a mental propinquity from which the individual can scarcely escape. They are refining the technique of gregariousness. Solitude, physical and intellectual, has become a difficult achievement. Whether a man lives in a fishing village on the coast of Maine, or on a Nebraska farm, or on a ranch in the Sierra Nevadas, he lives in a crowd, preyed upon by the power of mass suggestion conveyed to him by the newspaper, the radio, the telephone, and other mechanical devices. For these instruments can recreate the psychology of crowds: they stimulate the collective consciousness; they speak with the authority of numbers; they shake down to a common level of intelligence; they override the critical judgment of the individual; they encourage group passion and hallucination. Through mechanical invention the vices of the crowd are being sown in wide fields. Intensified propinquity is accentuating and reinforcing the instincts of the herd.

This is the crux of the difficulty. As one of its curious consequences, the coming of machinery has clothed the opinions of the pack with a new authority. Man's natural instinct for uniformity, his distaste for intellectual individuality and independence, his habitual intolerance of variations

from normal standards in the realm of habits and ideas, have taken on fresh sanctity as the machine process has knit together the members of the herd in a new unity. Consequently, conventional opinion tends to become more difficult to resist, and individual opinion more difficult to assert, as the development of science makes the collective judgments of the herd easier of ascertainment and expression. The step from mass production to mass thinking is, perhaps, shorter than we imagine.

Undoubtedly this development is accelerated by the necessities of the modern industrial state. As society grows more organic, more urban, under pressure of the machine, the processes of government acquire more importance. Because the individuals in the state are linked together in the production of goods, and the life of each depends upon the life of all, administration, regimentation, and organization take on an importance which they did not have in the pioneer or agricultural society. Consequently, in the machine age individual self-assertion is subordinated to collective action, and individual ideas and ideals give way to the ideas and ideals of the group. Whipped up by the community's instinct of self-preserva-

tion, mass opinion tends to override its minorities and crush out the lone voices.

* * *

One has only to watch the trend of our national life to appreciate the significance of this situation. Lynch law in the moral sense seems to be making a tremendous growth. Probably the war gave impetus to this development, for a nation in arms cannot tolerate the independent opinion of its minorities. War requires a regimentation of the public mind into a flat uniformity of thought and feeling. From the moment that hostilities are declared, truth for its own sake is at a discount, and the concentrated massing of public opinion behind certain elemental ideas is as essential to success as ammunition and battleships. This involves the wholesale planting of selected news and opinion by a common method. It implies a public mind that is suggestible, receptive, uncritical, and unresisting. To accomplish the result every available and effective instrument is utilized: pulpit, platform, moving pictures, and, especially, the press. The success of this propaganda process in the last war in shaping opinion and stimulating passion was startling. "Never before has the power

of collective suggestion been wielded with so much deliberate skill. Individual opinion having been ruthlessly brushed aside, the public mind presented a smooth surface for common impressions." Here in the United States we are still too near 1917 to forget the methods by which, in the hour of crisis, the fighting instincts were aroused and the nation was welded into a single instrument of vengeance. "Man is subject to the passions of the pack in his mob violence and to the passions of the herd in his panics."[8]

Following the exhibition of mass emotion which the war presented, we have witnessed such phenomena as the organization and spread of the Ku Klux Klan, with its doctrine of mass hatred of Catholics, Jews, and Negroes. We have seen the attempt to prohibit the teaching of evolution over wide areas and to enforce by law the acceptance of a biological principle to which an uneducated majority could subscribe—apparently on the theory that the ascertainment of truth is merely a matter of adding up voters. We have seen the weapons of the law used to impose particular standards of morality, to enforce particular codes of private conduct, to make the personal habits of the majority the personal habits also of the minor-

ity—in other words, to standardize by threat of penalty the ideas and preferences of an entire nation. We have seen the passion for uniformity express itself in vast Americanization schemes whose avowed purpose has been the creation of a homogeneous mental type, citizens whose ideas about government, property, and the industrial process will conform to a standard acceptable to the majority. We have seen the authorities of industrial towns crushing peaceful strikes by the brutal use of police and sheriffs, invoking "public safety" as a justification for the denial of such elemental rights as assembly and free speech, gaining the support of the courts in their attempt to override minority opinion and make the world safe for industry. We have wearily followed the long procession of special days and special weeks set aside for mass contemplation and reverence, such as "Constitution Week," "Patriotism Day," "Flag Day," "For God and Country Day"—days in which (to quote from a pamphlet of instruction sent to school teachers) we "implant in the mind of every child the superiority of our government over all others and the sanctity of the principles and forms of government as originally planned by our forefathers." We have seen the scarehead

pamphleteering of professional patriotic societies and the repressive tactics of various boards of education, colleges, and universities in their attempts to censor opinion and make the ideas of everybody measure up in Procrustean fashion to the standards to which the mass subscribes. "There seem to be some among us," said a recent spokesman of a so-called patriotic organization, "who are not satisfied with what the American people do and think. America is no place for knockers; and if these malcontents do not like our ideas and our ways of doing things, let them get out. The overwhelming majority of the American people is satisfied and that is enough."

Truly, majorities are in the saddle, and, as Walter Lippmann says, "the rule of the majority is the rule of force. For while nobody can seriously maintain that the greatest number must have the greatest wisdom or the greatest virtue, there is no denying that under modern social conditions they are likely to have the most power." [4]

* * *

We in this generation, therefore, face questions of great moment. They relate to the kind of world our children will inherit. How can we maintain

the freedom of expression and initiative of the individual when the machine process is accentuating the old herd instinct for solidarity? How in the complex interrelations of our industrial civilization can we find room for the individual conscience? How far is it possible to combine the uniformity and large-scale operation which industrialism demands with the diversity, originality and spontaneity which are the supreme contributions of the individual to society? Or, as Bertrand Russell phrases it, is it possible to have machinery in industry without having a mechanistic outlook in our thoughts and mental habits? Does the mass distribution of goods inevitably mean the mass distribution of ideas?

Let us say at once that we do not know how to answer these questions. The reconciliation of the group with the individual, of government with liberty, has always defied solution. Mankind has always stoned its prophets and from Socrates through Servetus to the present time runs the long line of those who testify to the indestructible inheritance of intolerance. But these troublesome questions press with peculiar insistence in our generation, for the machine process which has accentuated the pack instinct for solidarity is rein-

forced by the enthusiasm of democracy for levelling human expression and imposing the measures of mediocrity. Democracy is "the apotheosis of the commonplace," the glorification of "the divine average." Its proud boast is that it makes all people equal and all life uniform. Its distinction is the absence of distinction. Too often, in Rodó's words, it is "an organized hunting party against everything that shows aptitude or daring wing to fly." Our generation, therefore, in attempting to find place for the individual conscience, is under double attack. All the forces of our time are driving toward standardization.

But although we can give no complete answer to the questions which face us, we can at least reassure ourselves as to the validity of the life lived from within, not forced into conformity to an external mechanism. We can reaffirm our faith in the principle that the state, the community, the family, and all other social institutions are merely a means to an end, and the end is the individual. We can repudiate, for ourselves at least, the Hegelian fallacy which has formed the basis of so large a part of our thinking in this generation: the belief "that the state, or the community as a whole, is capable of some different kind of

good from that which exists in individuals, and that this collective good is somehow higher than that which is realized in individuals." [5] There is no social good apart from individual good. There is no such thing as collective happiness except as it comprises the happiness of individuals. We need a new definition of individualism in the interwoven complexities of our modern society. No one, of course, would subscribe to the *laissez faire* individualism of the Nineteenth Century with its emphasis upon acquisitive rights. Its day is gone, although its unhappy influence still persists. But the other extreme by which, in our thinking at least, we substitute a collective entity for the individual as an end to be served, is equally untenable. Somewhere in our scheme of things—indeed, at the very core of it—we must find place for the self-expression and spontaneity of persons. Somewhere we must lay the same emphasis upon the spiritual freedom of the individual in his pursuit of what he believes to be good, regardless of the opinion of the mass, that was laid by Buddha and Lao-tsze and Jesus of Nazareth.

But what about the majority? Our whole political system is based upon it. Reverence for it is interwoven with our thinking about democracy

and government. It has acquired an authority that protects it from criticism. It has the same sanctity and infallibility that in mediæval ages attached to the Church or the person of the king. For a hundred years or more people have grown up with the belief that deep within a fixed percentage of them there lay a sort of supernatural excellence, a divine judgment, a genuine gift of revelation. How can we talk of the right of the individual conscience when the opinion of the majority is hedged about with such hallowed traditions?

We need to be frank about this matter of majorities. Majority rule is a working plan by which we attempt in a rough way to determine policies of common concern. It is a political expedient by which, through the crude process of counting heads, we establish standards of action. It is acceptable because, as Lippmann says, "we do not know any less troublesome method of obtaining a political decision." But to credit this clumsy device with a kind of centralized infallibility and to proclaim that the voice of the people is the voice of God is to talk nonsense. More than that, it is vicious nonsense. Not only is it impossible to make virtue and wisdom dependent on

fifty-one per cent of any collection of men, but the unintelligent mouthing of this old superstition serves to incite majorities against minorities in matters which do not pertain in any way to political decisions. Thus in recent years we have seen random majorities, collected and directed by organized propaganda, claiming jurisdiction over personal beliefs and personal habits, overriding minorities in fields where the collective judgment has no business to go. There is a silent referendum in the hearts and minds of men against which no impertinent pronouncement by a majority can stand. For knowledge, for truth, for a valid line between right and wrong, for an appreciation of spiritual values, one does not consult the greatest number. The coarse thumb and finger of mass opinion cannot shape to any given pattern the conscience and intellectual integrity of a man.

"No man," says George W. Martin, in a recent notable essay, "surrenders his whole being to the state. . . . The state is for him sovereign only when his conscience is not stirred against its performance. Whatever, therefore, concerns the conscience of man, whatever brings its activity into operation, must, for the state, be sacred ground. As for the state itself, even where the opposition

is small, it is probable that more is gained by the possession of that energy of character which is willing to offer challenge than by destroying it." [6] Said Lord Acton: "The great question is to discover, not what governments prescribe, but what they ought to prescribe; for no prescription is valid against the conscience of mankind."

* * *

There is real truth in Herbert Spencer's observation that majorities are generally wrong. History is one long record of the scornful overturn of standards which the majority in the preceding generation had fought and died for. In Mr. Justice Holmes's classic phrase, "Time has upset many fighting faiths." It was the majority that stood behind the Spanish Inquisition. It was the majority that supported the burning of witches. It was the majority in America that upheld in election after election the institution of slavery and passed laws to suppress those who criticized it. It was the majority that rallied behind our unjust war on Mexico in 1845. It was the majority that prohibited the teaching of evolution in Tennessee. It was the majority on both sides that wallowed in

blood from 1914 to 1918. It is perhaps the majority in the United States that is to-day opposing our entry into the League of Nations. Majorities are generally wrong. On all questions involving moral or ethical considerations they are pretty sure to be wrong. A people should be judged, said Emerson, not by its majorities, but by its minorities.

As a matter of fact, it is always the minorities that hold the key of progress. The still small voice speaking through the conscience of a man, bidding him choose obloquy and ostracism rather than conform, is, now and always, the hope of the race. It gave us Wycliffe and Huss and Savonarola and William Wallace and Bruno and Hugh Latimer and a host of heroes and prophets who challenged the mass judgments of their generations—

> Lonely antagonists of destiny
> Who went down scornful before many spears.

What a glorious record it is, and how it relieves the drab and complacent pages of history! We see Socrates, on trial for his life, saying to his jury: "Athenians, either acquit me or do not acquit me; but be sure that I shall not alter my way of

life, no, not if I have to die for it many times. . . . For no evil can happen to a good man in life or in death." We see John Hampden, who, when he drew his sword for liberty, "threw the sheath away," riding unafraid to his deathbed from Chalgrove Field with two bullet wounds in his shoulder. We see William Lloyd Garrison dragged through the streets of Boston with a rope around his neck, reaffirming in the next issue of his paper, the *Liberator,* the same pledge with which he began his work: "On this subject [of slavery] I do not wish to speak or write with moderation. I will not equivocate—I will not excuse—I will not retreat a single inch—and I will be heard." We see Theodore Parker in his pulpit in Boston thundering against the iniquity of our war on Mexico: "Your President tells us it is treason to talk so. Treason is it? I think lightly of what is called treason against a government. That may be your duty to-day, or mine. But treason against the people, against mankind, against God, is a great sin, not lightly to be spoken of." We see John Morley standing before a hostile, howling audience in Manchester, throwing back into its teeth his condemnation of the oncoming Boer War:

"You may carry fire and sword into the midst of peace and industry: it will be wrong. A war of the strongest government in the world against this little republic will bring you no glory: it will be wrong. You may make thousands of women widows and thousands of children fatherless: it will be wrong. You may add a new province to your empire: *it will still be wrong.*" We see Eugene Debs addressing his jury at Cleveland in words that Socrates might have used: "Gentlemen, I have no dispute with the evidence presented by the Government, no criticism of the counsel for the prosecution. I would not take back a word to save myself from the penitentiary. I am accused of obstructing the war. I admit it. I abhor war. I would oppose the war if I stood alone." We see Woodrow Wilson, not as the brilliant leader of a nation in arms, but as a grim, stricken man, leaning on a cane, saying to a group on his doorstep: "I have no anxiety for the League of Nations. It will take care of itself. My only anxiety is for the people of this country."

It is spirits like these that give dignity and worth and glory to human life. In the light of their high courage, Emerson's words take on a fresh

significance: "Whoso would be a man must be a non-conformist."

* * *

Certainly a little more of this spirit of non-conformity would constitute a healthy admixture in American life. It would be a tonic to tone up the sluggish body politic. And it is sorely needed. For science has armed majorities with instruments of persuasion and coercion far more effective than any which they have previously wielded, and the individual must seek protection against the new usurpations of society. More completely than in the days of his grandfathers is he swallowed up in the collective mechanism; more menacing are the encroachments of the mass upon his inner freedom; more determined is the effort to establish the comfortable standard of the commonplace, and iron the intelligence, the emotions, and the will of everybody into a perfect smoothness. We need to teach this new generation that "nothing is at last sacred but the integrity of their own minds." We need to say with Thomas Jefferson: "I have sworn upon the altar of God eternal hostility against every form of tyranny over the mind of man." We need to breed a skepticism of intellectual authority,

a distaste for unruffled unanimities, a toleration of differences. We need to proclaim the glory of the Odyssey of the human spirit—the great adventures of thought, of passionate feeling, of æsthetic experience that constitute the birthright of mankind.

This is dangerous talk, some will say; these are wild and whirling words; this is the gospel of radicalism. On the contrary, it is thorough-going conservatism in the best sense of the term. For the enemies of society are not those who promote the processes of freedom, but those who try to block them. The danger to any civilization, or any living thing whatever, does not lie in progress, but in stagnation; not in growth, but in dry rot; not in change, but in the lack of change. The peril is that under pressure of intrenched and satisfied majorities we shall stone the prophets once too often. The danger is that we shall cling to the shell of our social and economic institutions too long after they have been outgrown, adhere to the husk and form of ideas too long after they are dead. For it is always to the outward symbol rather than to the inner principle that mass loyalty attaches itself, and the mob mind is quick to resent and if possible repress the lone voices that would call us back to reality. But these lone voices are

the true conservatives. Their aim is not to destroy, but to preserve, not to kill the roots of the social order, but to prune the dead branches that sap its life. Says Clifford: "A race in proportion as it is plastic and capable of change may be regarded as young and vigorous, while a race which is fixed, persistent in form, unable to change, is as surely effete, worn out, in peril of extinction." [7]

But our timid friends will not be satisfied. Change means unrest, they will say. Certainly it does. It is the business of man to be restless. It is the salvation of man that he is willing to "agitate" and "rock the boat." It is the glory of man that he is never satisfied, never content, eager for adventure in uncharted seas. Tranquillity is not life; it is stagnation. Not in hours of placidity do men build a Rheims Cathedral, or write a *Hamlet,* or push their boats across an unknown ocean to discover a new continent, but in hours of unrest. It is not security that develops the human spirit, but danger. "We must expect that the future will disclose dangers," says Professor Whitehead of Harvard in a striking passage in his recent book. "It is the business of the future to be dangerous. . . . The prosperous middle classes who ruled the nineteenth century placed

an excessive value upon placidity of existence. They refused to face the necessities for social reform imposed by the new industrial system, and they are now refusing to face the necessities for intellectual reform imposed by the new knowledge. The middle class pessimism over the future of the world comes from a confusion between civilization and security. In the immediate future there will be less security than in the immediate past, less stability. It must be admitted that there is a degree of instability which is inconsistent with civilization. But, on the whole, the great ages have been the unstable ages." [8]

We come, then, to an inevitable conclusion: in the realm of ideas standardization means death. Society cannot afford to stamp out variations from type; they are the biological steps by which the race advances. It is by the uniqueness, the differentiation, of a St. Francis, a Goethe, or a Darwin that we have any civilization at all. No society can be healthy which does not contain strong ingredients of non-conformity. No mass opinion has any claim to validity which is not continually challenged by the critical judgment of the individual.

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In 1813 eighteen workmen died on the gallows at York, England, on the charge of destroying machinery. They had resented the coming of the new civilization, they had feared the extension of its power, and they had struck out blindly to destroy it. It was a pathetic, foolish act. It was like trying to stop a glacier with a firecracker. Remorselessly and irresistibly the machine age has ploughed its way across the life of man. To-day we are in the complete grip of its gigantic force. Some of its consequences we know to be appalling; some we know to be good. In the midst of the revolution we can scarcely tell the good from the bad, so great is the upheaval. But this we know: that if as an incident of the machine process the opinion of the individual becomes more hampered in expression, and diversity and spontaneity are checked, then there are no compensatory advantages that can outweigh the disaster. Then, indeed, are we headed for spiritual bankruptcy. The things that make life worth preserving are not created by mechanism, nor are they born of organization, however efficient. They come only from the freedom of the human soul.

Chapter IV

THE MACHINE AND LEISURE

"What would you gain, ye seekers,
with your striving,
Or what vast Babel raise you on
your shoulders?
You multiply distresses, and your
children
Surely will curse you."
—SANTAYANA.

WHERE is our machine civilization headed? It has sprung so suddenly upon us and its pace is so swift that we are benumbed in our attempts to plot its course. We know how it started, but where will it end? And what is it doing to us? And what will its ultimate effects be upon the human race crowded together on a planet that is suddenly much too small?

We can only guess at the answers. Destiny is

running the film through the projector much too fast, and the picture is streaked and blurred. How the story is developing and whether it bodes good or ill for humanity we do not really know. One observer, Count Hermann Keyserling, sees everywhere the emergence of the "chauffeur type"—"primitive man made technical"—hypnotized by machinery, disavowing the old cultures, finding spiritual satisfactions in the new sense of physical power. Because what is technical is easily grasped by people in all stages of development, he concludes that we are now entering upon a "mass age," chauffeurs ruled by chauffeurs, a dominance by mere numbers worshipping mechanistic gods, an interregnum between the old culture that is dying and the new culture that is yet to be born. But Keyserling refuses to believe that the dominance of mechanism is more than temporary. "The technical can hardly continue to hold captive the imagination of mankind," he says. "The element of surprise is gone and will never return, not even if it should be proved possible to bring the moon down to the earth; for fundamentally every future possibility is already predicted . . . and only that which distinguishes can possibly be a goal for the ambitions. Once the technical has

become, as it inevitably must, a matter of course . . . then all of its achievements will have become the tacitly accepted foundation of a subsequent state of things." [1] Then and then only will a new culture arise, centuries hence, perhaps, when the products of the physical sciences have completely broken down the barriers of race, nation, and creed—a universal culture dominated by the new type, the "world-man." In the meantime, however, for ourselves and our children, we seem to be doomed to wander "between two worlds, one dead, the other powerless to be born."

But however discouraging the immediate outlook, Keyserling and his general school of thought are emphatic in believing that nothing is to be gained by trying to escape from mechanism or revolting against its control. The trail to the new culture lies *through* mechanism. By no other route can that objective be reached. "Those who preach the doctrine of 'back from the technical' are nothing else than bad romanticists," says Keyserling, and from laboratories and factories the world over comes a complacent "amen." Indeed, the apologia for the modern business and economic system is based on the assumption that somewhere at the end of the trail, and even en

route, lie cultural possibilities transcending those that may have been lost; that out of machinery have come and will come leisure and beauty and all those values which finally give to man's endeavour its ultimate sense and meaning. This is what complacent industrialists are preaching. This is what our entire educational system professes. This is the faith of the Occident.

It is this doctrine, too, that the new Russia has recently borrowed from her Western neighbours. Only where our mechanical development was originally the result more of drift than of foresight, and our belief in its cultural value a rationalization rather than an induction, Bolshevism has speeded up the process of industrialization as the definitely chosen means of reaching a more or less cultural end. Machines, machines, and more machines—socially controlled, of course—must blast out the road by which humanity will reach what Lenin called its "cultural maximum": this is one of the cardinal doctrines of Communism.

Something of this same philosophy was expressed by President Coolidge in an address in Pittsburgh. He spoke of America writing "that wonderful epic of coal and oil and steel," and painting "that inspired landscape of hillside and

waterfront, decorated by gigantic commercial structures, throbbing with the movement of industrial life and surmounted by cloud and fire." "The rattle of the reaper," he said, "the buzz of the saw, the clang of the anvil, the roar of traffic are all part of a mighty symphony, not only of material but of spiritual progress." [2]

* * *

It may be worth while to examine some of the assumptions upon which this philosophy is based. The first assumption is briefly this: out of machinery comes leisure. The machine is the new slave that frees us from the necessity of soul-consuming toil. Just as in the Greek state the existence of a slave class gave leisure to the privileged few, so now our mechanized slaves provide leisure for the privileged many. They release the thought and genius of man from the uncreative drudgery that burns up his energy. This is the philosophy of the machine. How valid is it?

A survey of the statistics of industry would seem at first glance to justify this point. In a hundred years we have reduced the factory day from fourteen and sixteen hours to eight hours. The reduction in the hours of steel workers in the United States from twelve to eight has affected since 1920

nearly 300,000 people. Ford is introducing the five-day week, and Steinmetz, before his death, confidently prophesied the coming of the four-hour day. If, with the aid of machinery, the goods which men demand can be produced with a minimum of time and energy, what is the occasion for long hours and back-breaking toil, and why should not leisure be the ultimate lot of the human race?

But the matter is, perhaps, not quite so simple as this easy analysis would indicate. With a stationary population and with fixed needs, it might indeed seem that we were heading for Utopia. But the world's population is growing far too rapidly, and the demand for goods is being stimulated far too effectively to warrant overconfident expectations of a lotus-eating future. Granting, nevertheless, that the machine process permanently guarantees to men a large amount of free time, what do we mean by free time? Is free time necessarily leisure? Is the fact that men are no longer tied to their tasks over dragging hours indicative of a civilization built on the spirit of leisure? In wrenching free hours from the clock, have we won a real emancipation from tightly woven days and from the rigid determinism of machinery?

Without going into technical definitions of what

is properly involved in the term "leisure," perhaps the point of our questions can be clarified by a brief excursion into the past. Alexander Hamilton practiced law on Wall Street in New York City. There were no typewriters or telephones and he had no stenographer. His legal briefs were laboriously copied out by hand, and his correspondence, quite heavy for those days, he meticulously took care of in the same fashion. He lived a full, busy life, "spending more time than I should, perhaps, in the planting of my garden, but taking great delight in it." Similarly, John Quincy Adams, when serving as Secretary of State under President Monroe, had no private secretary, much less a stenographer. "He wrote every word of his correspondence and despatches himself," said his grandson, "often copying the more important papers with a hand palsied by writer's cramp." And yet he found time, during his term of office, to prepare an elaborate treatise on weights and measures, involving extensive research in history, physics, and mathematics—a book which eighty-five years later Sir Sandford Flemming described as "still a classic."

If Alexander Hamilton and John Quincy Adams were alive in our generation, could they

more easily find time to plant in a garden or pursue favourite studies like physics and mathematics? They would have at hand to assist them in their daily tasks all the conveniences of modern civilization: stenographers, typewriters, telephones, telegraph systems encircling the world, airplanes carrying their mail—all the contrivances by which we seek to make more effective the capacity of man. They would undoubtedly be leading figures in our age as they were in theirs, for they were gifted above the average. One can imagine John Quincy Adams serving as Secretary of State to-day. Across his desk would go an interminable procession of dispatches cabled from every corner of the world. A note sent in the morning, perhaps by some Far Eastern Government of whose existence Adams knew only by hearsay in 1819, would be laid before him in the afternoon. Diplomatic representatives from sixty nations or more would be clamouring on his doorstep. Scores of urgent invitations to address Chambers of Commerce, Pan-American conferences, and foreign policy associations would come to him daily by wire and special delivery letter. A dozen assistants and secretaries would protect him from outside con-

tact, answering his letters, declining his invitations, trying to keep less important considerations from crowding out the more important. If John Quincy Adams under such circumstances tried to pursue his researches in mathematics and physics, the insomnia of which he gently complained in 1819 would probably land him in the hands of an alienist.

Alexander Hamilton, practicing law in New York City to-day, would find himself similarly driven. He would serve on innumerable committees and boards dealing with social and philanthropic matters. By wire and mail would come invitations to speak all over the country: political "keynote" speeches, college commencement addresses, special celebrations and anniversaries, international conventions, women's meetings, business associations, religious gatherings, and so on down the long list *ad infinitum*. Where in 1801 he received one letter, to-day he would receive two hundred. Indeed, the bare task of keeping up with his correspondence would be Herculean. Visitors, other than clients, would come to see him on every conceivable errand, and in spite of all that his secretaries could do to shield him, his ap-

pointment calendar would be crowded with names. Harassed by the telephone, assaulted by telegrams, buried by snowdrifts of mail which no amount of effort would seem to diminish, fighting his way home on the subway, perhaps, at the end of the day, to his house, "The Grange," on One Hundred and Sixty-third Street, Alexander Hamilton might well wonder what degree of leisure, what opportunity for detachment and reflection, our machine civilization had brought to him. And the flowers in that garden—what time could he possibly spare for them!

Is it possible that we have missed the mark in all this business of inventing labour-saving and time-saving devices? In attempting to do away with the drudgery of life, have we merely succeeded in multiplying a man's contacts with his fellow men, in so exposing him to the world that he can no longer escape its irrelevancies and trivialities? Have the telephone, the typewriter, the automobile, and the railroad train broken in upon the life of man so far that leisure has become not a free gift but a thing to be fought for? Has machinery robbed us of the very reward it dangled before our eyes?

These questions are not limited in their significance to a particular class or level of society: they relate to all kinds of people. For what is true of men in positions of leadership like Adams and Hamilton is equally true of far humbler folk. One has only to watch a city crowd hurrying with hunted faces to or from its work, or milling anxiously up and down the streets, to realize the extent to which our machinery has increased the pace and feverishness of living. What difference does an eight-hour day make if the whole of life is so regimented and prescribed by time clocks and factory whistles and all the other stimuli of an efficient civilization that energies are exhausted in trying to keep step? Trains that must be caught, appointments that must be kept, acts that must be performed in accordance with the imperative time table of the machine regimen—one begins to see that all these driven beings are, in no small degree, the victims of their own inventions. One gets the impression of vast masses of people physically and spiritually out of breath. Whatever else machinery may have brought them it has given them no hint of leisure, no inkling of its meaning or worth. What does free time mean if it is dominated by the tempo of machine time? What

justification has labour-saving machinery unless it saves the labourer?

* * *

Why have we missed the mark? The logic of the machine seems irresistible: the faster the humdrum tasks of life can be mechanized the more will the spirits of men find leisure for what is above the mechanical. What is wrong with this theory, and how is it that we have been so misled? Keyserling supplies an answer. "What is so terrible in this world," he says, "is that life is exhausted in whatever can be made mechanical." We seem to have stepped into a vicious circle: our machines have given us leisure to run our machines. The free time which we have reaped is ploughed back into the process. We become so absorbed in the new technique that we forget the purpose. Devices become an end in themselves. A typewriter is invented, and the very facility which it creates tempts us to write or dictate a thousand needless letters which inspire a thousand needless replies. A telephone is perfected, and we use it to burden our friends with the endless news of our own superficialities. An automobile is brought into being, and we rush to and fro on trivial, time-

consuming errands that have no real purpose or meaning. All these inventions tempt us to an intensity of activity; and we come to find spiritual satisfaction in a day cluttered with those tasks which involve the employment of mechanical devices. There is a zest, a glow of accomplishment, about a life that is just busy, busy with telephoning, busy with correspondence, busy in rushing by subway, elevated, or automobile from one appointment to another. The strenuous life brings an inner compensation, a sense of achievement, a belief that when we set the wheels of our machines in motion something worth while automatically happens. Says Keyserling: "Americanism proves that a complete and full inner life can be lived without a soul, without intellectual interests, without cultivated feelings."

"Contemptuous of ideas, but amorous of devices"—this is the way G. Lowes Dickinson describes our American civilization. Certainly it is the mechanical side of life that primarily interests us. We are like children with new toys. It is apparatus, equipment, that is exciting and essential. It would appear rather important to the American mind that Darwin should have a stenographer and that Keats should be equipped

with a typewriter. Admirers of Thoreau would probably present him with an automobile, and to Pasteur would go a laboratory designed in the best American style. With us genius does not seem to be genius unless it has its proper physical setting. Galileo, dropping his iron weights from the top of the leaning tower of Pisa, is somehow amateurish. Joseph Henry, winding the coils of his electro-magnet in a cellar in Albany, seems almost pathetic. If, instead of carrying on their experiments in the back of a bicycle shop in Dayton, Ohio, the Wright Brothers had created an Institute of Aëronautics, with marble columns in front and the name over the door, the world would have followed their early work with far greater respect and attention.

But this is merely the old savage worshipping his tools. The wise president of one of our large universities recently remarked that the provision of modern laboratories for able scientists is often the beginning of the end as far as their constructive work is concerned. So much energy is exhausted in planning the new buildings and equipment that by the time they are ready for use the creative fire has burned low. In appointments and physical equipment American laboratories far excel the

laboratories of Europe; scientists from abroad are invariably amazed by the perfection and completeness of our buildings and outfit. Yet the distribution of the Nobel prizes in the physical sciences up to 1928 would seem to indicate that with all the elaborateness of our equipment something has been left out of the calculation: Germany, with 60,000,000 population, has received twenty-three awards; France, with 40,000,000, has received eleven; England, with 35,000,000, twelve; Holland, with 7,000,000, six; Sweden, with 6,000,000, five; Denmark, with 3,000,000, four; the United States, with 120,000,000, five. Bricks and mortar can be very deceptive. Buildings and equipment can hide a great deal of vacuity. The wheels of our new inventions can revolve at furious speed and not really get us anywhere. Motion is not progress, and apparatus does not create genius. All the stenographers and typewriters in America have not given us a Darwin nor a Keats, nor have we recaptured through the automobile the elusive spirit of solitude which Thoreau discovered at Walden Pond.

When, therefore, the President of the United States talks to us about the rattle of the reaper and the roar of traffic ushering in an era of "spiritual

progress," we should be humble—and perhaps a little skeptical. Rattle and roar as indices of an advancing civilization do not seem entirely reliable. Noise is not the best possible guide to the good life. "The buzz of the saw" and "the clang of the anvil"—again to use the President's words—may conceivably drown out all the softer and finer notes of the "symphony" of which he speaks. Certainly, when we are tempted to think of leisure as the automatic consequence of machinery, it may be a healthy corrective to recall the remorseless and meaningless urgencies of the Twentieth Century pace: the memory of a subway crowd in New York City, or the frenzied folk who pour through the Loop District in Chicago. Perhaps a more salutary corrective would be an analysis of the hectic futilities that crowd our own daily lives.

* * *

Another assumption in connection with this philosophy of the machine needs to be examined. Not only do we hold that out of machinery comes leisure, but we assume that out of leisure comes culture, or at least the possibility of culture. The more leisure that a nation acquires, the greater the chance of life being lived on its higher levels.

Given free time, with its consequent opportunities for travel and contact, the result must be a richer, fuller existence. Universal leisure is the soil from which must inevitably come a universal culture.

But somehow or other this theory does not seem to be working out as it ought to. In the mechanization of industry and in the consequent growth of free time, America is well in advance of other nations. Yet when it comes to comparisons on a cultural basis, only a one-hundred-per cent. patriot, blind to realities, would venture to give us a very prominent position. Indeed, there are few signs in America of a fresh, vital, indigenous culture. We are educating for efficiency and not for the good life. We are educating for civilization and not for living. Culture is frankly not our objective; we do not use our leisure as a means of obtaining it. Henry Ford expresses admirably the American point of view—the Chamber of Commerce philosophy:

"The people with a five-day week will consume more goods than the people with a six-day week. People who have more leisure must have more clothes. They must have a greater variety of food. They must have more transportation facilities. They naturally must have more service of various kinds. This increased consumption will require greater production than we now have. Instead of business being slowed up

because the people are 'off work,' it will be speeded up, because the people consume more in their leisure than in their working time. This will lead to more work. And this to more profits. And this to more wages." [3]

America is not thinking primarily of leisure in relation to culture; it is thinking of leisure in relation to the development of new needs. Not leisure to live, but leisure to buy! In his searching analysis: *America Comes of Age,* André Siegfried makes this comment: "They [the Americans] are advancing in one direction and retrogressing in another. The material advance is immeasurable in comparison with the Old World, but from the point of view of individual refinement and art, the sacrifice is real indeed. Even the humblest European sees in art an aristocratic symbol of his own personality, and modern America has no national art and does not even feel the need of one." [4]

Our attention seems to be focussed on producing things rather than people, with output set up as a god. We are absorbed in the mechanical processes by which things are created. We are interested in pushing these processes into all the interstices of our lives. We have not only mechanized our industry but we have mechanized our leisure. Our

free hours have taken on the colour of our working hours. Just as the machine has stereotyped our tasks, so it is stereotyping our play. Just as self-expression and spontaneity in industrial life have been crushed out for thousands of workers by the processes of mass production, so self-expression and spontaneity in leisure hours are being undermined by mechanical devices. Leisure to-day takes mainly a receptive instead of an expressive form. The mechanical piano, the phonograph, the radio, the movie, create an atmosphere of passivity. Many of us do not to any great extent participate as individuals in our own leisure; seldom do we contribute any element of originality or preference. The same forces that have gone into the big business of providing our necessities have gone into the big business of providing our amusements. "Our souls sit on the bleachers and watch a game played no longer by us but for us." Leisure means freedom, but if a man's freedom consists in efficiently amusing himself according to standard formulas, or subjecting himself to the passive reception of standard relaxations, then he is not really free. He is as much the victim of the machine process as he is when, for eight hours a day of high-speed production, he monotonously

turns a series of screws, as the moving belt goes by him in a vast repetitive rhythm.

In such an atmosphere of strain and escape, of pressure and reaction, culture cannot easily find a home. Culture is the product of real leisure, of unhurried hours, of quiet absorption in things for their own sake. It cannot be approached by short-cut paths; it cannot be won by efficiency methods; it cannot be spread by rotary presses or radios. The application to the spiritual life of the philosophy of mass production must inevitably create a society bleak and shallow.

Of course, our business leaders, when they think about this matter at all, find compensation in our material development. A house, a car, a bath for every workman—comforts within the reach of all—this is the prevailing creed. Our emphasis is on comfort as an ideal, rather than on culture. Our hope is that perhaps out of comfort culture will develop. "Higher standards of living," says Mr. Hoover, "and the greater diffusion of these standards . . . are the foundations upon which the finer reactions of life can be expanded and strengthened." [5] In other words, our belief is in efficiency as a sort of magic lamp, by which we can summon any sort of genii we desire. The fact

that the genii of a blossoming culture, of a deep-seated spiritual life, have not yet appeared does not disturb us. Perhaps we have not rubbed the lamp hard enough. In any event we have the lamp, and we are busy gathering up its gifts, although it may not at once bring us everything in proportion. Even so eminent a scholar as Professor Thomas Nixon Carver of Harvard, in commenting on the cultural lag in America, indulges in this complacent apologia: "We must content ourselves with such arts and graces as can be cultivated by busy people." [6]

Busy people! This is what machinery has made of us. Its spirit has insidiously crept into our thinking. Its virtues—motion, speed, quantity—have all unconsciously been set up as human virtues. Its results—standardization, uniformity, increased productivity—have become indices of worth. Because machinery must be efficient in its operation, therefore the ideal of individual life must be efficiency. Because an engine that will work without cessation or breakdown, like the engine in Lindbergh's airplane, is obviously the goal of mechanical science, so by perverted analogy must the human engine have the same goal; it must always be in motion, it must always function, it

must always be busy. Busy people! "Think of a man like the late Lord Northcliffe," says Bertrand Russell, "working like a galley-slave to produce bloodshed and misery on a scale hitherto unknown in human history. How admirable it would have been if he could have been persuaded to lie in the sun, or play bridge, or study chess problems, or even take to drink."[7]

The Bishop of London recently addressed a letter to his clergy in which he spoke proudly of his own busy life. "I have come back," he said, "to an autumn of what, from a human point of view, is unrelieved toil. October first to Christmas Day is filled every day, except for the one day off each week, from 10:00 A. M. to 6:00 P. M." Then followed a long list of administrative and pastoral engagements, including three days interviewing one hundred and ten Harrow boys to be confirmed, a critical bill to see through the House of Lords, and some sixty sermons and addresses, besides the daily letters and the interviews. "All this," he said, "might justify the comment of a kindly man of the world, 'Why, Bishop, you live the life of a dog.' But this is precisely, though on a larger scale, the life of every one of you." "One sometimes wonders," said Graham Wallas, in commenting on

the Bishop's letter, "what would be the result if our Bishop were kept for ten weeks in bed and in silence, by an illness neither painful nor dangerous, nor inconsistent with full mental efficiency." [8] One wonders, too, what possible harm would come to the world or to themselves if many of our clergymen, our professors, our moral and intellectual leaders, who take a real pride in keeping busy, were similarly afflicted.

* * *

Whatever else it may do, leisure does not automatically produce culture. It may create an opportunity for culture, but it does not guarantee that the opportunity will be developed. One has only to watch the way in which leisure is generally used by all classes, rich and poor alike, to realize that it is not, in America at least, a particularly auspicious seed ground for the cultural life. Frankly, most people are not ready for leisure; they have not been educated for it. The wealthy man of business who accumulates without purpose, who has never acquired the art of living, and would probably die, as sometimes happens, out of sheer inanition if he retired, is the counterpart of the factory worker, who, not knowing what to do

with his spare time, smokes his pipe disconsolately outside the factory gates when holidays come. Any qualities either possessed which could not be used in work have withered away. They have allowed industry to eat them up.

This inability to use leisure may be a reason why some people are afraid of it—that is, they are afraid to have it extended to others. The question is frequently asked: "What have the 300,000 steel-workers done with the leisure they won when the working day was reduced from twelve hours to eight hours?"—as if upon the answer to this question in terms of something uplifting depended the workers' right to have their free time. I have myself participated in conferences in which solemn employers took strong stand against a shorter working day on the ground that the workers would misuse their new leisure—that they were not fit for it. As if employers were fit for it! A visit to almost any so-called "fashionable resort" from Florida to Maine is enough to dispel all illusions as to the cultural use which our "successful citizens" make of their leisure time. Between a Newport and a Coney Island there is little to choose.

But although few people are fit for leisure,

everybody ought to have it. It may not make for what we have rather loosely been terming "culture," but if it introduces some element of serenity into the paroxysm of our mechanized life, some occasional hours of golden and gratuitous irrelevance, it may help to balance the sense of urgency and pressure that machinery has bred. No one has any business, perhaps, to offer an apology for idlers when Robert Louis Stevenson has already attended to that kindly task. There come times in the life of every individual when he ought to do things that have no immediate relation to self-improvement—times when he wants merely to whittle a stick, or listen to the band play, or throw stones into the old mill pond. Perhaps he is thinking; more likely he is not. We are still too bound by the traditions of Puritanism to appreciate the positive values to be found in idleness. As Bagehot points out, the ability of a ship to find its way unerringly across pathless oceans might never have been attained for humanity if in early days there had not been dreamers, apparently idle, and certainly misunderstood by their contemporaries, who were interested solely in the contemplation of the movements of the stars. To-day, sheer idleness—browsing without any particular

purpose from one lazy interest to another—may be the means by which we keep the lid from blowing off our high-power civilization.

* * *

If we have been unsuccessful in seeking culture through leisure, it may be due not alone to our inability to win the spirit of leisure, but to the fact that culture comes primarily not from leisure but from work. Generally speaking, it is probably the character of a man's work rather than the character of his leisure that determines his interests and shapes his life. Work is not merely the wholesome exercise of the faculties of brain and body; it is a method of self-development; it is the self-expression of the human personality; it is the outlet for creative instincts. Not in hours of play but in hours of toil do men reach their farthest North in life. The artisans who worked with Michael Angelo on the casts of the statues of the Medici tombs, the craftsmen who with affectionate pains pounded out at the forge the hinges for the doors in Independence Hall in Philadelphia, the two groups of labourers who raced toward each other in high excitement across the Utah desert to tie together the Union Pacific Railroad and thus span

the continent with a thread of steel—these are the men who live creatively, and these are the moments when life reaches a cultural peak.

But these men and these moments are vanishing. Machinery has taken the place of craftsmanship, and the skilled mechanic of our grandfathers' day has given way to a worker who nurses a high-power automatic tool. Our great-grandmothers spun their cotton by hand and doubtless took an inner satisfaction in seeing the developed product. To-day cotton is spun in a mill by whirling spindles in the midst of din so terrific that words must be shouted to be heard, and the girls leave at the end of the day with the relief of convicts escaping prison. And what is true of mills and factories is true also, in part at least, of other types of work, not only in the manufacturing but in the business realm. Adding machines, calculating machines, cash and credit registers, addressing machines, duplicating machines, machines for bookkeeping, for billing, for money handling, and for various kinds of statistical work, are fast introducing an element of unrelieved monotony—unimaginative tasks wearily performed over dragging hours. Our justification is efficiency. By this machine process speed is augmented, standardiza-

tion is made possible, less skill is required of operatives, and fewer people are necessary to accomplish a greater volume of work. For millions of clerical workers—the so-called "white-collar" class—with their minute and specialized jobs, their narrow contacts, their remote relationship to any creative purpose in the large-scale organization in which they are insignificant cogs, what possibility is there "for the human spirit to soar"? Our fathers talked about "growing mentally through work" and "the joy of work." A few years ago Dennis Driscoll, of the Boston Central Labour Union, spoke in Faneuil Hall in answer to President Eliot's talk on "The Joy of Work." "The Joy of Work," said the speaker, and paused. Then, as he lifted his head from the manuscript and looked out over the crowded hall, a sound of derisive laughter spread in wave after wave over the audience. There was but one thing to think of such an idea as the joy of work: it was a bitter joke. To the workmen present it was ludicrous that a man could be so foolish, so ignorant of the conditions of modern industry, as to believe that there is any enjoyment in it.

Apparently we must give up our drab gospel of work for work's sake. Forces that are stronger than

we are seem to be demanding that we uproot many of the old orthodoxies about joy in work, and frankly admit that under the machine régime work for most people must be colourless, empty of intellectual stimulus, and mentally and spiritually sterile. Some of us are beginning to say that perhaps, after all, work, except to a favoured minority, never carried with it the satisfactions we imagine; perhaps our forefathers were merely moralizing when they talked about the joy of work; perhaps it was a rationalization by which a Puritanical generation tried to find relief from a life of toil that was, in reality, "nasty, brutish and short." In any event, for ourselves we are asked to be realists, to admit that machinery with its clatter and repetition-strain, with its atmosphere of oil and dust, or merely with the ceaseless monotony of its dull tasks, cannot serve as the creative outlet in the development of personality. Writers like Arthur Pound face the issue frankly. "The attendant of automatic tools," he says, "does not live while he is on the job. He exists, against the time when he can begin to live, which is when he leaves the shop. His task does not call for a fraction of his full powers as a sentient being, or monopolize his interest. If he could buy the same

amount of well-financed leisure as easily in any other way, he would shift jobs to-morrow. . . . The hours given to tending automatic machines are given to buy leisure, and in that leisure the operative lives." [9]

We are therefore advised no longer to look to work but to leisure in the shaping of personality and the development of culture. Work for most of us must be the grudging dues we pay for the privilege of living—the homage we render the machine; but leisure is when we escape from tyranny, when we are free to seek whatever satisfactions can be wrung from living. This is the industrial philosophy of the realists. The consequences of this philosophy are revolutionary: we are thrusting upon leisure the entire responsibility for the cultural life; we are asking leisure to assume a burden which up to this time, in our thinking, at least, leisure has always shared with work.

It is the practical acceptance of this point of view that causes André Siegfried to ask what is perhaps the most searching question put to America in recent years:

"During the day the worker may only be a cog in the machine, they [the Americans] say; but in the evening at any

rate he becomes a man once more. His leisure, his money, the very things which mass production puts at his disposal, these will restore to him the manhood and intellectual independence of which his highly organized work has deprived him. This change in the center of gravity in the life of the individual marks an absolute revolution in the ideas on which society in Western Europe has been built up. *Can it be possible that the personality of the individual can recover itself in consumption after being so crippled and weakened in production?*" [10]

A question like this is bound to give us pause in accepting the gospel of the realists. The old ideal of work ought to be true; is there any way by which we can make it true? Even some of our industrial leaders are manifestly uneasy. Mr. Hoover has talked about "the fast repetitive processes that are dulling the human mind," and "the tendency of modern industry to eliminate the creative instinct in the workers, to discard entirely the contributions that could be had from their minds as well as from their hands." Mr. Charles M. Schwab has spoken of the necessity of "enabling men through their work to realize a larger life and take a greater zest in their workmanship."

But what is to be done? How can this result be achieved? Dr. L. P. Jacks talks about "the transfiguration of labor from a burden that crushes into a culture that ennobles." "Industrial civili-

zation," he says, "must find a means of ending the divorce between its industry and its culture or perish in the attempt." "Art and science, instead of standing aloof from work, and apart from it, must come down into it and make it their own."[11] Like all of Dr. Jacks's utterances these are eloquent words, but how can they be put into effect? The high-power machine is here. Every year is giving us not less power but more power, not less machines but more machines. Every year, too, these machines become more and more automatic, with less and less demand upon the intelligence and initiative of the operative. As we look into the future we see this process developing at an accelerated rate. We see machines, machines, machines. They no longer represent a technical method, a new device; they have become a means of survival; they are integrated with the possibility of millions of people keeping themselves alive. The time is past when any choice was possible as to whether we should have them or not. Nor can we materially modify their methods of operation. We are committed beyond escape to large scale organization, to the minute division of tasks, and to the increasingly complete mechanization of labour. How under these conditions can

we "raise labour to those levels of excellence that make it worthy of a man?"

* * *

Frankly I do not know the answer to this question or to any of the other questions which we have raised. Moreover, I do not believe that anybody else knows the answers. As history runs it was only yesterday that man created his machines, and his experience with them has been too brief to enable him to know what they are doing to him, or how, if at all, he can guide and control their ultimate consequences. The relationship of leisure and culture to the machine is interlocked with an evolution the course of which is too uncertain to plot. All we know is that we cannot back out of this jungle of machinery; we must push ahead, guarding the inner life from thorns as best we may, and plucking such fruits as we can.

Committed to this blind course, we need a sense of values. We need at least to know the difference between thorns and fruits. Perhaps more than anything else America needs a prophet, a Socrates with quiet insistence to question us about our machines. Are we not idealizing their virtues?

Do we really think that speed, standardization, quantity measurements, are worthy human qualities? Is efficiency truly the goal of the good life and has it not been vastly overrated when applied to human beings? This is what a Socrates would ask us and this would be the point of his questions: that men were not made to be well-fitting cogs in machines; that we are not walking accessories or spare parts; that life is greater than the process of securing the means of life, and we must be at least as concerned with its finished splendour as with structure and structural problems; that we cannot always live in an atmosphere of oil and dust; that it may be we are laying the foundations for a civilization of great beauty, but that most of us are rushing up and down ladders, happy in our own feverishness.

This is what a Socrates would tell us. But Socrates is dead, cast off by a generation that did not understand him. What can we do to attest our allegiance to his leadership? Perhaps there is one small act of faith to be performed. Each for himself, we can keep at least a corner of our lives safe from mechanism, some shining citadel to be defended at all costs against the assaults of efficiency, some sunny garden which order and ma-

chine-made standards and busy interests have not defiled. Education has failed if it does not teach us how to build, against the world, such a retreat as this, how to maintain, against the pressure of convention, a home of the unsubdued.

The City Council of a town on Long Island recently ordered cut down the hundred-year-old shade trees lining its principal street. The reason given was that "the trees make this promising industrial centre look like a hick village." For those of us who would be guided by the realism and perspective that Socrates would have shown, here is the task: to resist the encroachments of industrialism upon the inner life; to keep alive the shade trees in the human soul.

Chapter V

THE UNITY OF CIVILIZATION

> "When the chalking up of a figure in a New York bank can make or mar fortunes in Tokio and Stockholm, is it possible that men should retain their simple feudal loyalties, and their old sense of national divisions?"
>
> —BRAILSFORD.

AN occasional nightmare haunts the sleep of Twentieth Century man. Wide eyed and frightened he stares through the dark. He dreams that his machines have stopped. Nothing more deadly could happen to him. His very existence is predicated upon their continuous operation. Their pulsations have become an indispensable part of the structure of his life. In a single century they have become his means of survival. They are here to stay, or else to perish with him. As a flesh-

eating creature cannot return to the conditions of its remote ancestors and subsist upon a diet of herbs, so Twentieth Century man cannot return even to the days of his grandfathers and live without his machines. Consequently, he guards them with anxious care, and his dreams are disturbed by a vague fear that something will happen to them.

But what could happen to them? Why should they stop? What is to interfere with their continuous operation? If the life of man is dependent upon the regulated revolution of machine wheels, why is it not reasonable to suppose that the wheels will continue to revolve? Is there indication of any loss of intelligence on the part of man, or are there difficulties in the way which have not existed for a century or more?

That difficulties are increasing in the path of our machine civilization is probably true. Its very compactness is its greatest weakness. It is fast developing a unity, a solidarity, an organic body. The cells that compose it are no longer independent. They have been woven together like the cells of the human body, each highly specialized, each performing its own function, each essential to the health and life of the whole. Thus, if one group of cells be damaged, the whole body of cells is

damaged, and this whole body can be killed by a single vital wound.

This is what is happening to our machine civilization. It is bringing a new economic synthesis into the world, a new principle of integration. It has developed a high degree of specialization as between different factories, different areas of the same country, and even different nations, each unit contributing to the whole; and the total products of this joint labour are the consumable commodities upon which modern life is based. But the units have lost their independence. Each factory, each area, each nation, is part of a vast living body. The cells have united in an organism in which lack of harmony, or the disease or disuse of any of its members, may imperil not only the health of the other members but the health of the whole. More and more each year our civilization exemplifies the law that the greater the complexity of an organization, the greater also its susceptibility to fatal hurt. As its energies increase, it develops within itself a deeper, a keener, a more exquisitely ramified sensibility to every shock or wound.

It is this process of cellular conjugation, this fast-growing element of interdependence, that distinguishes our new world life. No longer are

there self-contained industries; no longer can a worker produce exclusively for his own consumption; no longer is Pope's ideal possible or even thinkable:

> Happy the man whose wish and care
> A few paternal acres bound.

There is a real sense in which every man in the world to-day is working for everybody else, a real sense in which every industry is dependent on every other industry.

At first glance we might say that shoe manufacturing is related only to the tanners on the one hand and the retail shoe dealers on the other, and that these three units form an independent self-sufficient group. The tanners provide the leather; the manufacturers turn it into shoes; and the shoe dealers sell the product to the public. But shoe manufacturing is a matter of machinery; machinery is made of iron and steel; iron and steel are the products of mining. Even tanning is not an independent unit. It is related to cattle raising, which in turn is dependent upon farming. It requires sheds and barns and slaughter houses, which involve the building trades, which in turn involve tools of iron and steel, so that once more

we find ourselves back at the mining industry. At the other end of the process, the retail shoe trade requires buildings and shop fittings, and thus has direct relationships with saw mills, brick kilns, glass factories, and a dozen other industries. Instead, therefore, of a simple diagram of three units, the complete picture of shoe manufacturing involves nearly every industry in the country, and the lines of relationship are so tangled and criss-crossed that the chart is almost unintelligible.

This mutual dependence in modern society can be illustrated in another way. Each producing group constituting an industry forms a market for the products, not only of associated industries, but of every other industry in the country. That is, the market for the output of each depends upon the output of all the others. For a man's capacity as a consumer is derived from his capacity as a producer. If he is not producing he has no means with which to buy. For example, a producing group engaged in coal mining expends its consuming power on steel, timber, transport services, food, clothing, and other commodities. In times of depression, with a slackening demand for coal, there must also be a slackening demand for the output of other producing groups. Consequently, in time

of depression each individual firm is working at low pressure because other firms are working at low pressure. Each is inactive because the general power to consume has fallen. The disease that afflicts one afflicts them all, and in the congested community of industry in which we now live no quarantine measures can be effective.

It follows, therefore, that any disaster in one business has far-reaching and often immediate consequences throughout the whole industrial system. The British coal strike of 1926 affected ruinously nearly every industry in Great Britain, and its cost which, indirectly at least, another generation will still be paying, is estimated at $1,500,000,000. In addition there were other losses not measurable in terms of money: the social and physical degeneration in the mining and industrial districts, and the distrust and bitterness which the whole needless and fruitless controversy engendered and which will probably not be allayed in our time. Similarly, the various coal strikes in the United States have brought suffering and even peril to railroads, manufacturing plants, steamship lines, power companies, and indirectly to nearly every business in the country. The consequences of these disasters have fallen for the most

part on industries that were no more responsible for their causes than the victims of the Mississippi flood were responsible for the rising river that carried away their houses. All were innocent sufferers in a system of things infinitely complex and infinitely difficult to comprehend.

* * *

This new integration which the machine process has introduced is far more than a nation-wide phenomenon. It has leaped the barriers of nations and blotted out boundary lines in an earth-wide conquest. The world of to-day constitutes a single economic organization. No longer are countries self-contained or self-supporting. To keep its industrial processes going—that is, to sustain its own internal life—the United States must import tin, silk, jute, nickel, cork, rubber, and many other commodities. The War Department has listed thirty specific materials which are called strategic because they are essential to the prosecution of war, and because we either do not produce them at all, or can supply them only in quantities insufficient even for peace-time requirements. Similarly, Great Britain must import two thirds of her food supply, and hitherto she has paid for it, in

part, with her own coal. Italy is absolutely dependent on outside sources for coal and iron. These imperative needs of industry overflow all the barriers of nation and race, and run together at common levels.

No longer is the exchange of commodities between nations restricted to articles of luxury. No longer are populations faced with starvation if they increase more rapidly than the food resources which they themselves can supply. The whole world has become a market to buy in and every race and creed under the sun is thronging the shops. Local supply and demand are no longer determining factors in establishing the price of essential commodities. A British manufacturer will buy steel ingots from Sheffield, Essen, or Pittsburgh, according to the profitable bargain afforded by purchase at any one of these centres when they are delivered to his factory. And what is true of commodities like steel is true also of credit. A state, a municipality, a financial corporation, is no longer restricted to local resources when it desires to borrow money; each avails itself of the best terms obtainable in the money markets of the world.

It follows, therefore, that the same specializa-

tion which is distinguishing the development of the machine process on a national scale is also accompanying its development internationally. More and more each nation is contributing its particular material or skill to the ultimate finished product, and the commodities which one nation consumes are the result of the joint labour of many peoples. A piece of linoleum on the kitchen floor represents the coöperative effort of three continents: Hindoos, Algerians, and Argentinians united to produce it. There is not a man or woman in America whose daily life is not in constant touch with that of peoples scattered across the seas in five continents—peoples whose customs are strange to us, whose language is unknown, of whom many of us, perhaps, have never heard, but without whose labour our entire machine civilization would come tumbling about our ears.

Every year adds to this mutual dependence of nation upon nation. Every year the interrelationship becomes more intricate, and the pattern, with its thousands of criss-crossing threads, more involved. There is scarcely a commodity the curtailment of which would not affect human life at a dozen points. During the war, the United States Shipping Board, in its desire to check un-

necessary imports, placed a ban on human hair brought in from China and used in the manufacture of hairnets. Here was a luxury that could obviously be dispensed with. A few weeks later a call of distress came from the manufacturers of smokeless powder. Human hair is necessary for making the best type of press cloths used in cotton-seed oil mills. One of the by-products of these oil mills is linters, or short cotton fibres, which constitute an essential raw material in the manufacture of smokeless powder. Human hair from China was a prerequisite to our waging effective warfare in France.

Mr. William C. Redfield, the former Secretary of Commerce, illustrates the point with the following comment:

"If the German cruiser, *Cap Trafalgar,* had succeeded during the World War in stopping even temporarily the movement of manganese from Brazil to the United States or Great Britain, the effect upon the steel-making centres of England and America would have been embarrassing. If the *Emden* in her brilliant cruise through the Indian Ocean had interrupted the movement of manganese and shellac from India or graphite from Ceylon and Madagascar to the western nations, or the stream of tin and rubber flowing from the Malay Peninsula and Sumatra, the result would have been disastrous. There were times in the World War when crises of this kind were visible, as when Italy was short of coal and when the supply of

gasoline in France was nearly gone. The emergencies happily passed without disaster, but danger was at the door in each case." [1]

Even the Bolshevik government, angrily holding its skirts aloof from capitalism, finds itself being dragged irresistibly into the current of world affairs. "We are becoming a part," laments Trotsky, "a highly individual but nevertheless component part, of the world market. Our previous independence of its fluctuations is going. All the fundamental processes of our economy not only come into close relation with the corresponding processes of the world market, but are being subjected to the laws governing capitalist development, including changing conditions. It is therefore to our interest, to some extent at least, to have improved conditions in capitalist countries, for if conditions in those countries were to grow worse, it would be to our disadvantage."[2]

This new network of human relationships has obviously created difficulties which were not foreseen when James Watt obtained his patent for his steam engine in 1769. In many of their aspects, these difficulties are no longer susceptible of national solution and treatment. They have grown beyond the limits of national control. When the

Near Eastern and Central European markets were eliminated in the fiscal collapse following the war, and the slowly evolved and elaborate system of exchange broke down, the effects of this disaster were felt around the world, even in the trade of the South Sea Islands. It was a problem thrown in the face not of individual nations but of the human race. Similarly, the continued widespread unemployment in England, with its direct threat to the health and life of the state, is a problem which cannot be solved by the British people or the British Parliament acting alone. It is rooted in causes traceable to the far corners of the earth. Directly and indirectly nearly every nation in the world is contributing to it. Again, the grave difficulties of the farmers here in the United States defy solution on any exclusively domestic basis. Their surplus products must compete in world markets with the products of the farmers of fifty nations. Any effective remedy must depend upon all sorts of complicated and interrelating factors, such as the ability of other nations to pay, the influence of foreign debts, and the tariff regulations of countries thousands of miles away, which our grandfathers knew, if at all, only by name. Just

as influenza crept upon us in 1918 from countries over which we had no jurisdiction and under conditions which we could not control, so may a nation be overwhelmed by economic diseases, arising in far-away areas, and visiting their relentless consequences upon innocent and helpless peoples.

The danger to civilization to-day lies in the fact that economic internationalism has far outstripped political internationalism. We are trying to run a Twentieth Century industrial world with the social apparatus devised for an Eighteenth Century agricultural civilization. Coördination of effort to supply the world's economic needs has not kept pace with the economic dependence of one country upon another. Far from realizing the extent of that dependence and organizing their endeavours accordingly, nations cling to the old formulas of independence with passionate determination. Although the international division of labour is theoretically admitted as the economic basis of civilized life, nations shrink from attempts to reconcile the claims of nationalism with the new world-wide economic system which modern science has thrust upon us. "Ye are members one of another" has certainly not been accepted

in its broad political applications, to say nothing of its ethical significance.

* * *

An interesting and important corollary of this new economic integration is the fact that in our machine age the acts of individuals have more and more far-reaching effects upon others, and hence the consequences of these acts are farther and farther removed from the acts themselves. I am not speaking of what modern life has done in lengthening the relation between cause and effect in the moral realm and the resulting inapplicability and breakdown of much of our old utilitarian ethics—inviting as such a digression would be. I am speaking rather of the ever-widening influence of individuals over their fellow men as modern science projects their acts and ideas, through scores of intermediate agencies, to the earth's far corners. In the days of our great-grandfathers—when Alexander Hamilton, the Secretary of the Treasury, was writing his report to Congress about "the vast scene of household manufacturing which contributes more largely to the supply of the community than can be

imagined"—no business area or group could by itself vitally affect the industrial weal or woe of the country, let alone the world. Certainly dislocation in one part did not involve similar disturbance in another part. A crop failure in Georgia or bank failures in New York did not touch, or only indirectly touched, the industrial workers in Massachusetts and Pennsylvania. No one dreamed that the fall of the German mark on the Berlin Bourse would some day bring suffering to far-away places like Chile and Ceylon. No one imagined that the effects of individual human acts, of individual decisions blindly and perhaps mistakenly made, would ever reverberate around the world, fundamentally altering the lives of millions of people.

But that day has come. That is what our machine civilization has done to us. It has wired the world together in a vast, intricate circuit; the electric spark that starts anywhere on the line will travel to the end. The president of a bank in New York decides, with the approval of his board, to buy Czecho-Slovak bonds. His decision is based upon but one consideration: the security and yield of the investment. But the proceeds of the bonds

are used to develop the water-power resources of Czecho-Slovakia. Cheap power means ability to manufacture at a profit. It also means ability to undersell rivals in neighbouring countries. This in turn leads to a tariff war, out of which grow international bitterness and perhaps future disaster. The bank president is the innocent cause of consequences which may well stagger the imagination.

But one is not limited to high finance for illustrations of this widening geographical area between cause and effect in human relations. The determination of an individual manufacturer to launch out into a new field, the vote of a board of directors to suspend a dividend, the defalcation of a bank clerk, the decision of an executive committee to call a strike, are caught up in the network of relationships which modern science has woven, and are ramified in terms of consequence across states and continents. It was a pistol shot fired in 1914 by a half-demented student in a town called Sarajevo that brought Western civilization to the edge of the abyss.

It must, of course, be admitted that the radiating effect of good and evil in human relations is

nothing new in the history of mankind. Over many ages its potential hope and tragedy have been sounded in song and story:

> Sophocles long ago
> Heard it on the Ægean.

But our machine civilization has accentuated a thousandfold the possibilities of this progressive influence. It has reached out with gigantic hands to compress time and space within a small compass, and the process has ruthlessly jammed men together in a narrow world, multiplying their contacts and thus magnifying the importance of individual action as its effects are transmitted by impact. In brief, our machine civilization is a vast nervous system. When shock comes it grows in the process of transmission, carrying its reactions to all the cells of the body—a body into which modern science has breathed the breath of life. It is this very unity, this solidarity, that threatens the future. If the wheels of our machines ever stop, it will be because some disease, originating, perhaps, in a remote part of the organism, blocks a commercial vein or artery, or exerts some pressure upon an industrial nerve, finally bringing an

irresistible paralysis to the whole body of our civilization.

* * *

Into this delicately adjusted mechanism of our modern life comes the old savage. The transformation that has revolutionized his world has scarcely touched him. His modes of thought, his impulses, his prejudices are as they were when the average cost of transporting a ton of merchandise was fifty cents a mile instead of a cent a mile, and when the average trip across the Atlantic was three months instead of a week. Supremely conscious of his new tools and weapons, and glorying in the power which they give him, he remains unconscious of his own unfitness to use them. He repeats the complacent dictum of Frederick the Great in regard to the inevitability of war, and makes ready his weapons for the next outbreak. Indeed, on this subject of force as the final arbiter of tribal difficulties—the last court of appeals—he is the victim of the same irrational impulses that have swayed him from the beginning of time—primitive impulses that antedate reason and that disregard any law or purpose other than their own satisfaction. Only now he rationalizes these im-

pulses more cleverly than he used to do, and tries to give war a reasonable position by wrapping it up in the flag, or by calling it "a war to end war," or by attributing it to some objective cause such as the necessity of repelling "the Huns," or "manifest destiny," or the defense of national honour, or the protection of women and children. Or, he will frankly argue that because irrational impulse is primitive and overpowering in everyone in whom it is stimulated, it is, after all, natural; and therefore war, as one of its forms of activity, cannot be abolished. Consequently, it must be accepted, and consequently, too, the best of possible reasons must be found to justify it.

Some of the reasons thus advanced are ingenious. The president of a large Eastern university recently wrote me as follows:

"Is not the population of the world now too large? To be perfectly brutal, may not blood-letting do the race good? Possibly China was benefited by the loss of thirty million people in the Taiping Rebellion. Europe has increased its population four-fold in the last hundred years. Would it not be better off if the Armenian race, for example, were subtracted, or some of the Balkan States removed from the scene? . . . I shudder as I read what I have written, but once in a while it may be justifiable to subject our moral judgments to the cold douche of a purely scientific view."

The difficulty with this "scientific view" is that it is about as unscientific as any idea could possibly be. Races or states cannot be "subtracted" or "removed from the scene" in any wholesale fashion. Populations can be decimated, but war, as an instrument of decimation, is crude and undiscriminating. It does not take merely the undesirable or the unfit. Physically there are no unfit among the combatants. The unfit are at home, too feeble to fight. And on the intellectual plane there is no way of sending our unwanted Uriahs to the front lines to perish. War takes the educated and the uneducated, the cultured and the uncultured, the artist and the moron. It is probably true that some undesirable citizens perished among the 10,000,000 slain soldiers of the last war—citizens whose death was no direct loss to society. But among the slain, too, were our scientists and our poets and our intellectual and spiritual leaders in the years to come, young men upon whom the hope and promise of the future were built. There was Henry Moseley, the brilliant physicist, working in the realm of atomic structure—a man whom Sir Ernest Rutherford declares can never be replaced. They put him in the signal corps and his brains spattered the stones at Suvla Bay. There were

Rupert Brooke, Alan Seeger, Charles Sorley, and Joyce Kilmer, the poets; Donald Hankey, the essayist; Otto Braun of Germany, the critic; Stanislaus von Prowazek, the parasitologist; Harold Chapin, the dramatist; Robert Doubille, the paleontologist; Karl P. Fan, the mathematician—and a great host of fresh, new leaders in every walk of life, wiped out in four years of stupid, clumsy, and inconclusive massacre. Of the two hundred and forty enlisted students at the École Normale Supérieure in Paris—an institution which supplies the French universities with professors—one hundred and twenty were killed. Among the graduates of this school, five hundred and sixty, who were already professors in the universities, were mobilized; one hundred and nineteen were killed. Of the students resident at the École Centrale des Arts et Manufactures, the most important engineering school in France, one hundred and seventy-nine were killed, together with three hundred and sixty-two of the graduates.

To use war as a method of eliminating the undesirable and checking a surplus population is like weeding a garden with a steam shovel. You may get the weeds, but you will get the plants, too. If the race can devise nothing more efficient than this

process as a means of improving the quality of human life, then indeed is it intellectually bankrupt, and the sooner it liquidates its affairs on this planet the better.

* * *

But with these easy rationalizations on his lips, the old savage sits in the shadow of a catastrophe that almost overwhelmed him and makes ready for the next cataclysm. He justifies his activity with the slogan that the best way to avoid war is to be "prepared." Consequently, preparation to be ready for war is his chief business, his main preoccupation. Indeed, it constitutes what is actually the greatest industry in the world. It is annually consuming billions of dollars and the service of millions of men. The progress of military science has been amazing. The lessons of the last war were not lost, and from engineering boards and from the laboratories have come weapons and devices for fighting, in the air, on the land, on the sea, and under the sea, of far greater deadliness and capacity for destruction than those of a decade ago. Every science is being called upon to contribute its best and latest results—mathematics, engineering, physics, chemistry, metallurgy, mechan-

ics, optics, radioactivity, electro-dynamics, aëronautics, economics, zoology, psychology, and many others. Machine guns are now available which fire 1,500 shots per minute. An automatic cannon has been perfected which fires one-and-a-quarter-pound shells at the rate of 120 per minute. We now have a 16-inch gun which hurls a missile weighing more than a ton a distance of 27 miles. A speed of 150 miles an hour for airplanes is now common, with a possibility of 300 miles an hour. Lord Halsbury, attached to the British Ministry of Munitions, foresees cities overwhelmed in the "next war" by oceans of poison gas released by enemy airmen. He says:

"In a war of any magnitude there will not merely be armies engaging armies, but whole nations mobilized against nations. It inevitably follows that the old demarcation between the military forces and the 'civilian population' will cease to exist. The girl filling a shell at a factory is just as much part of the machinery of war as the soldier who fires it. She is much more vulnerable and will certainly be attacked. It is impossible to say that such an attack would be unjustified.

"The matter does not end with mere munition workers. The central organizations essential to modern warfare are carried on in 'open towns' and largely by civilians. An attempt to paralyze them would be perfectly legitimate. The first conclusion, therefore, that emerges is that an attack will be made upon the 'civilian population.'" [3]

To meet this situation—this mania latent in the old savage and rejoicing to be set free upon its work of destruction—the realists in the war offices around the world are marshalling their plans of defense: gas masks for everybody, huge "gas-proof chambers" to which people can flock as to arks from the deluge of death, "the organization of gas-fighting battalions of helmeted and masked men carrying spraying appliances with which to dissipate the gas clouds in the sky." Thus will the world be kept safe for democracy! Thus do Christian nations proclaim their discipleship of Him whose mission was to bring peace on earth, goodwill to men!

Meanwhile, here in the United States, a country that is "peculiarly devoted to the arts of peace" and that has "never laid on any other country the hand of oppression" except, perhaps, when our military forces have taken the field "to enlarge the area of self-government, to extend the scope of freedom and to defend the principles of liberty"—to use the words of President Coolidge—here in this land where our "passionate aim" is to have our intercourse with other nations "rest on justice and fair dealing and mutual obligations," we firmly insist on 10,000-ton cruisers and eight-

inch guns. "We are sufficiently acquainted with human nature to realize that we are oftentimes the object of envy," says Mr. Coolidge. Our current expenditures for our army and navy are more than twice what they were in 1914, while our total budget for military functions is nearly two and a half times larger than our total budget for civil functions. "We cannot be loyal to the flag if we fail in our admiration for the uniform," says Mr. Coolidge. Where public health gets one half of one per cent. of our national budget, public education one third of one per cent., and the promotion of labour interests one seventh of one per cent., our current military functions get more than thirty-three per cent. "We wish to discard the element of force and compulsion in international agreements and conduct, and rely on reason and law," says Mr. Coolidge. We spend almost as much each year in supporting the Reserve Officers' Training Corps in our schools and colleges as we do in maintaining our entire State Department at home and abroad. "We must not neglect to lay our course in accordance with the ascertained facts of life," says Mr. Coolidge.[4]

Preparedness is the watchword. It is the specious explanation by which the old savage seeks

to mask his primitive impulse for destruction, the most fatuous and the most dangerous rationalization of our time. And truly we are prepared—"prepared," as Lord Lee of England remarked, "for a fresh descent into hell!" The professional patriots, the dealers in platitudes on national greatness, the sentimentalists who seek vicarious heroisms by getting someone else to die for home and country, the clergymen who use war to elevate the human spirit when religion has lost its appeal, the manipulators of public opinion enamoured of their power to translate words into acts—these will turn the scale at the critical moment by calling the next war "holy."

* * *

But if the old savage to-day is no worse than the old savage in past crises, surely we shall muddle through. From the time of Jeremiah gloomy prophets have foretold the doom of the human race, but it still seems to survive. Why then should we be unduly perturbed over the present situation?

It is the conjunction to-day of two new factors in history that creates a supreme crisis in our time. In the first place civilization has become an organic unity, susceptible of fatal injury in any of

its parts. In the second place, the old savage walks into the picture, armed no longer with bows and arrows, but with TNT. For both these developments—the close-knit world and the weapons—modern science is responsible. That it has given birth to both in the same generation is the point of ominous significance. For each reacts on the other. If this were still a world of isolated sections, without economic or social ties woven into the body of its life, the new weapons would not be particularly menacing. The old savage might blow up part of his civilization, but this local destruction would not vitally affect the rest. Or if the old savage had not been given dynamite and poison gas, his ancient bows and arrows, or even his gunpowder, could not seriously damage the new solidarity of civilization. But now there is no alternative, and we are faced with the question whether this new unity which we have woven upon the loom of the last hundred years can survive the weapons of a race bent on using them and apparently oblivious to their implications.

How are we going to answer this question? Obviously there are certain things we cannot do. We cannot stop the progress of modern science;

it has gathered a momentum that nothing can check. We cannot undo the new propinquity of modern life; it is inextricably linked into the science that created it. We cannot easily stop the manufacture of weapons, for many of them have purposes legitimately related to peaceful pursuits. There is just one course left: the old savage—can we do anything with him?

* * *

An easy answer comes to the lips of many: let us educate him. But what kind of education? Our foremost political leaders, our admirals, our generals, our large business executives, our prominent figures in community and social life, are most of them "educated" men—graduates of our schools and colleges. But their education does not seem to have opened the eyes of many of them to the utterly new environment in which we are living and the peril to that environment which crouches just around the corner. Certainly their education has not prevented many of them from joining the great goose step of nationalism which is now marching across the world. Indeed, the procession is in charge of these very men. One has only to glance at the names of the trustees and directors

of some of our civic and patriotic organizations to realize the extent to which the maintenance of the status quo, the suppression of "dangerous" ideas, and the promotion of 100 per cent. Americanism have become the preoccupation of our "educated" governing class.

And as far as the coming generation is concerned, are we not sedulously inculcating the same illusions and the same ideas and catch cries that we ourselves have inherited from the past? Are we not trying to fit our children into the same intellectual strait-jacket which we wear? These are the words of Professor Kilpatrick of Teachers College, Columbia University: "Education has been the process by which those at present in charge of affairs determined what the rising generation should think and do. . . . The upholders of established group opinion have always seen in the school a chief means of perpetuating the established opinion."[5] This is John Dewey's comment: "When we think of the docility of the young we first think of the stocks of information adults wish to impose, and the ways of acting they want to reproduce. . . . Education becomes the art of taking advantage of the helplessness of the young; the forming of habits becomes a guarantee

for the maintenance of hedges of custom."[6] To use an arresting phrase of Professor Robinson's: "Since we do all we can to corroborate the beneficence of what we have, we can hardly hope to raise up a more intelligent generation bent on achieving what we have not." [7] It is an open question whether the administration of our schools will be able to resist the attempt to make education the accomplice of national self-infatuation, whether the teaching of history, for example, will not continue to be part of the ritual of a tribal religion. For as J. A. Hobson points out, patriotism in our schools to-day is displacing the older piety: it has its bible of imperial history, its ritual worship of the flag, its commemorative saints' days, its drill processionals, and its consecrated vestments.[8] The mystical sentiments which formerly were directed toward a distant deity are now claimed for the State and the social economic order it seeks to insure. "The battle of Waterloo may have been won on the playing fields of Eton," remarks Bertrand Russell, "but the British Empire is being lost there." [9]

On the subject of war, our education of this new generation here in the United States is even more direct and to the point. In the last few years, with

the financial encouragement of the War Department, we have introduced the Reserve Officers' Training Corps into more than two hundred of our educational institutions. These institutions include universities, colleges, high schools, and military schools. One hundred and twenty-four of them are of college or university rank, and in eighty-three of these one hundred and twenty-four the course is compulsory. The purpose of these courses is officially stated to be "the development of good manhood through military drill," and doubtless there is much about such exercise that is physically excellent. But there is much, too, about it that is cynical and sinister. It has as its chief result, as President Morgan of Antioch College has pointed out, a change in the mental outlook of young people, so that they look upon war as a normal part of life and expect to take part in it. It habituates the thought of the participants to slaughter as a rational means of settling international difficulties, as an accepted method of reaching decisions. By its emphasis upon force as the controlling factor in human society, it surrounds them with an atmosphere of skepticism toward those generous, humane, sensitive impulses which the race has struggled during so many centuries,

and in the face of so many discouragements, to breed into its life. In its spirit the Reserve Officers' Training Corps negatives all that the rest of our college courses ostensibly seek to accomplish. It is a blatant denial of everything that we mean by a liberal education.

This is particularly true when the military instruction is as crudely direct as it is, or has been, in some of our institutions. The official drill book of the Reserve Officers' Training Corps, until recently at least, contained such sentences as these: "We live in a world governed by divine laws which we can neither alter nor evade. And in this world of ours force is the ultimate power." [10] "The mainsprings of human action are self-preservation and self-interest—in a word selfishness. And in this universal and unchangeable human trait we find at once the cause of war and the means of peace. So selfishness is not an unmitigated evil; otherwise it would not have been ordained." [11] An army officer in the West, in a course on "military psychology," enlightens his students with the following comments:

"Gentlemen, this is a period of truce. The great wars have not been fought. . . . Gentlemen, I envy you. You are coming to a stage when not

only your nation, but all western civilization is threatened. You are to become military leaders. . . . Gentlemen, there will be wars to the end of time. Everlasting peace is for the grave, not for life. The wish for everlasting peace is born of fear and ignorance." [12]

This is the sort of blind counsel to which many of this new generation are exposed. This is what is included in the word "education." And on top of all this, our press and our platform echo with appeals and exhortations by leaders to whom our youth naturally look up. Says the national commander of the American Legion:

"If this nation is to protect its own life and be able to enforce its will for good upon recalcitrant nations, it must be strong, not only in purpose but in sound military preparation for the inevitable war that will some day be forced upon us." [13]

Says Major General J. G. Harbord:

"War represents a permanent factor in human life and a very noble one. It is the school of heroism from which a nation's noblest sons graduate into highest manhood. . . . Individual preparation for national defense is necessary—for the peace-time benefits that come to the people who prepare themselves, for the efficiency that will come when your streets will again echo to the tread of marching soldiers, your railways and your waterways again teem with men and implements of war assembling to protect the flag. . . ." [14]

Says Major General Charles P. Summerall, Chief of Staff of the War Department:

"The cost of that terrible struggle [the World War] has been more than twenty billion dollars, but the account shows vastly greater material gain. It has been in the prosperity of our people who have more money per capita than any other nation. It is seen in our balance of trade, which has amounted to many billions as a result of the war, and it is seen in every element that constitutes the nation's wealth. To-day our territory has an estimated value of more than $320,000,000,000, and every part of it has been possessed through war or the power to make war. If material returns alone are considered, war has been the most profitable activity in which the country has ever engaged." [15]

Says Secretary of War Davis:

"Despite our love for peace, every generation of Americans has unhappily been forced to wage war in order that this country might enjoy righteous and honorable peace. . . . Who can say that history will not repeat itself, that the future will be unlike the past, and that what always has been will never be again?" [16]

Says Secretary of the Navy Wilbur:

"We must be prepared against the aggression of any people influenced, as all people may be, by some extension of the mob spirit, some outburst of passion, or some real or fancied insult. There is nothing so cooling to hot temper as a piece of cold steel." [17]

Recently in Plainfield, New Jersey, the local veterans refused to participate in the unveiling of a war memorial. They issued a statement declaring that the inscription on the memorial was "conceived in a spirit of blatant pacifism" and that it was "a glorification of the prophet Isaiah with only a passing reference to the gallant patriots who had served their country as soldiers and sailors." What was the inscription to which these youthful veterans took such vigorous exception? It was from the fourth verse of the second chapter of Isaiah:

> "And they shall beat their swords into plough-shares,
> And their spears into pruning-hooks.
> Nation shall not lift up sword against nation;
> Neither shall they learn war any more."

This is what our "education" has done for us!

* * *

Obviously something more than this kind of education is needed. Our children may grow up to be very complacent and respectable citizens—as we are—and, because they do not know that

this is no longer the world of their grandfathers, they may lose civilization itself, as we nearly lost it in our time. Certainly if they think as we think and act as we act, the chances of their losing it are exceedingly bright. It is only as they break away from the traditions and shibboleths to which we cling that they can hope to save it. The barren patches of human history, as Froude points out, have always been the times "in which the forms of the fathers' thoughts were the forms of the sons', and the late descendant was occupied in treading into paths the footprints of his distant ancestors." [18]

That is why this new generation, with its inquiring, restless, and even rebellious spirit, represents so great a hope. God knows we have done and are doing our best to thwart and cripple it as it gropes for new paths and plays with new ideas. We have tried and are still trying to pour it into the mould of our own thoughts, to make its members "patriots" like ourselves, to keep alive in them the primitive impulses of mass brutality and collective arrogance which we have rationalized into such shining virtues. And we may succeed. In our hands is all the machinery of the schools, reinforced by the new mechanical methods of propaganda, like the radio and the moving

picture, and by the marvellous growth of the press, which, too, is in our control. We may succeed in making this new generation think as we think, in instilling into it our prejudice and our fear—our fear of new ideas, our fear of the unknown and the untried, our fear of whatever may disturb the ordered comfort of our lives.

But let us not be too pessimistic. The outlook is discouraging, but perhaps we may fail. This new generation is independent to an extraordinary degree and seems to have marvellous powers of resistance. More than that, it seems to have a real capacity for idealism. And it may have too much intelligence to accept our old formulas. It may be able to withstand the pressure of our educational attack. For let us be thankful the attack is not completely united. Its ranks are split. There are some—a minority, to be sure, but enough to make themselves heard—who would join hands with this new generation in a search for a better way, some who believe they see where all this mass egotism, this tribal emotionalism, this flag-waving "preparation," is carrying us. In this minority are teachers who, in spite of supervisors and boards, refuse to be the mere tools of the old savage in impressing upon growing children the

ideas he approves. In this minority are clear-eyed scientists who see the menacing implications of the sciences which they have helped to harness. In this minority, too, are writers and editors and men and women in every country, in public office and in private life, who dare to speak the truth as they see it, and who are tireless and undiscouraged in seeking a fairer path into the future. To the younger generation in all its hope and promise this minority would signal a message of solemn warning: *You who hold the destinies of civilization in your hands, science has at last accomplished what all the philosophers of all the ages have dreamed of: it has made the world one. This new compactness is based on nothing else but stubborn facts. You cannot bring your dynamite and your TNT into this unity without blowing the whole of your civilization into eternity. Which course will you choose?*

Chapter VI

WANTED: AN ARISTOTLE

> "Dear! Dear! Does it sound like rubbish to you? I suppose it does. You think I am talking of a dreamland, of an unattainable Utopia? Perhaps I am! This dear, jolly old world of dirt, war, bankruptcy, murder and malice, thwarted lives, wasted lives, tormented lives, general ill-health and a social decadence that spreads and deepens toward a universal smash—how can we hope to turn it back from its course? How priggish and impracticable! How impertinent! How preposterous! I seem to hear a distant hooting. . . ."
>
> —H. G. WELLS.

TWENTY-THREE hundred years ago, a citizen of Greece undertook a very daring enterprise. He tried to bring within the compass of a single analy-

sis the whole sweep of human knowledge. He tried to build up a scientific systematization of information as a basis for the control of life. He tried, by taking thought, to reduce the chaos of human affairs to a rational order. His name was Aristotle, and for twenty-three centuries the world has paid tribute to his memory.

And yet Aristotle failed in his attempt. The trouble with him was that he lived too soon. He lived in an age which was just beginning to inquire about human life and its relations. There was no store of ordered knowledge, accumulated during generations, upon which he could draw. The sciences were in their merest infancy; biology scarcely existed; chemistry and physics were limited to speculation; and astronomy was a matter of a few shrewd guesses. Of the past of mankind there was no knowledge at all. Tutankhamen had been buried in his tomb for a thousand years, and nothing was known of him or his civilization. Even as regards contemporary society there was little exact information. The Western Mediterranean and the frontiers of Persia, an area but little larger than the state of Texas, formed the outposts of the world. Beyond those barriers lay the Unknown, holding dark and unfathomed

secrets. With so many pathetic limitations, with so many gaps in the framework of human knowledge, with so many essential factors missing, even the overshadowing genius of Aristotle could make no headway toward an intelligent world order.

The question which we ought to consider is whether or not to-day we have overcome most of those limitations, whether or not we have filled in most of the gaps, whether or not there is presented to us in this generation an opportunity to begin the conscious building of a rational world with the tools of systematized knowledge. Have we reached a point in human development where we can harness the organizing intelligence of mankind to the task of making this planet a fairer home for a better race? Can we so shape the world about us as to wring from it a saner and more balanced life? Must there always be hunger? Must there always be hideous extremes in possession and opportunity? Must ours always be an acquisitive society? Must there always be war? Must this always be a blood-drenched planet in which civilizations appear as intermittent gleams between periodic convulsions of barbarism? Must the human race always drift with the tide, guided not by intelligence but by passion?

Can conscious control be substituted for chance, a definite plan of progress for impulsive trends, sustained collective thinking for fortuitous circumstance?

These are not questions which can be answered in a day. It would be presumption to attempt an answer in a chapter. All we can do is to suggest certain possibilities, certain developments in human affairs, some of them within recent years, which seem to give our generation a unique opportunity to begin the building of what may prove to be a new world order.

* * *

I said that Aristotle failed in his attempt because of the huge gaps in human knowledge. He built his world upon unknown factors which made havoc of his plans. And those factors, many of them, remained unknown for centuries after his death. There was, for example, his geographical ignorance. He had no conception, not even a dream, of what the physical world was like. To-day we know the terrestrial globe from the north pole to the south. Our airships and airplanes are ferreting out the last unvisited spots on

the earth's surface. The advance of human knowledge in this direction has been irresistible. Geographically speaking, there is nothing unknown this side of the moon. There are no hordes of barbarians waiting behind shadowy frontiers to upset the plans and calculations of statesmen and philosophers. We know the world and the people in it. We know how many men there are who inhabit the earth, and how many, under the present rate of increase, there are going to be. We know their distribution and their customs. We know how they came to be where they are and the parent stocks from which they developed. We know their relationship to the rest of the animal kingdom. Moreover, we are delving deep into human psychology and the mainsprings of human habit, and already we think we have discovered many of the answers to the question why men act as they do. When we sit down, therefore, to the task of creating a new world order, we are armed with tools of geographical and social knowledge of which Aristotle never dreamed.

But this is by no means all. In the realm of physical science, as we have already noted, the human race has registered an advance which dis-

tinguishes our age from all the ages that have preceded us. After countless weary centuries, in which man was the plaything of forces he did not understand and could not control, in our time he has suddenly risen with masterful gesture to assume command. He has started in to tap the resources of the universe for his own advantage. He has set out to make himself at home on this planet. Already he can outfly the eagle on his self-made wings. He can outrun the deer in his automobile. In his submarine, he can outswim the whale. While a watch is ticking off a few seconds he sends his voice around the world. In an airplane he spans the width of a continent or an ocean in a day. He has torn from the skies the secret of electricity, and he uses it as a giant slave to do his work.

Nor is his thirst for mechanical power in any degree assuaged. Rather, his career of mastery has just begun. Every year that passes brings the world more completely under his subjection. With chemistry and physics as his weapons, he is wrenching from a reluctant universe the secrets of new forces. This knowledge, once appropriated, is being applied to ever-increasing phases of

his own life. There is no end to the path upon which he has set his feet, no diminution of his conquering spirit. The objectives and tactics of coming battles are already determined. Synthetic food and the elimination of agriculture; improvement in transport and communication so that, as Professor Haldane of Cambridge University prophesies, "any two persons on earth will be able to be completely present to one another in not more than one twenty-fourth of a second"; the harnessing of wind and sunlight and the storing of their energy in a form as convenient as coal or gasoline; the subjection of night, because darkness is a check on the freedom of human activity—these are only a few of the coming points of attack; these are samples of the possible conquests of man as he strides with resistless steps into the future.

It is this marvellous acquisition of power, this sudden development of a giant's strength, that has given our race an almost haughty assurance in the face of new perils. We know now, as Aristotle did not know, that human life is essentially controllable, that man's destiny lies in his own hands, that the means and method of progression and re-

trogression are within his own grasp. As never before, man is to-day the captain of his own fate.

* * *

There is another respect in which our world differs from Aristotle's, and which simplifies the task of thinking of our problems in planetary terms. The world to-day has an intellectual and spiritual unity of which Aristotle never conceived. I am not now speaking of the cohesiveness among nations which modern industry has introduced, or the solidarity of human interests which our new economic system has created. I am not speaking of the world of airplanes and radios and steamships. I am speaking, rather, of the world of common ideas and conceptions which by one process or another have become the joint inheritance of the race. The idea of liberty which came to us from Greece, the conception of order and law which we took in large degree from Rome, the belief in the intrinsic and final value of the individual which developed out of the spiritual gropings of the Middle Ages—it is ideas like these that have brought cohesiveness into the world almost as binding as that created by physical science.

Long before there were steamships and tele-

graphs, ideas were creeping over boundary lines. Long before the days of Watt and Morse, the intellectual life of man was internationalized, and a definite unity had been woven into the world-wide society of mankind. There is not a field of thought in which this cannot be illustrated. Bacon was an Englishman, Descartes was a Frenchman, Spinoza was a Dutch Jew, and Leibnitz was a German; together they laid the basis of modern philosophy. And whom do we study to-day? Not the thinkers of any single land, but men drawn from different countries and different continents—William James the American, Bertrand Russell the Englishman, Bergson the Frenchman, and Croce the Italian.

Moreover, these men build their work on each other. Just as in the economic realm one nation is dependent upon every other nation for its finished goods, so in the world of ideas—whether it is art or music or philosophy or literature—every nation makes its special contribution to the finished product. Lagerlöf is a Swede, Shaw is an Irishman, and Hauptmann is a German, but their work is moulded by the writers, dead and living, of forty nations.

Thought cannot be nationalized. No embar-

goes can be maintained against ideas. The fundamental unity of civilization is the unity of its intellectual life. The Scotsman Adam Smith and the German Karl Marx, the Englishman Darwin and the Frenchman Pasteur, the Belgian Maeterlinck and the Indian Tagore, the German Einstein and the American Millikan—these are the men, from every country under the sun, who have helped to break down the watertight partitions of Aristotle's day and give the world a conception of civilization as a coöperative achievement, and a sense of the intellectual life as an international responsibility.

When, therefore, we take up the task of organizing the world behind a more rational mode of planetary life, we have a fundamental basis of unity that did not exist in Aristotle's time.

To sum up, Aristotle's dream of a great synthesis of human knowledge as a method of building a better world, has, in our day, a far larger opportunity for realization than it had in his time. And the reason is, as we have seen, that we know so much more than he did, and the knowledge is so much more widely diffused. We know the world geographically and socially; we have developed powerful tools for the mastery and con-

trol of our environment; and finally the problem has been simplified by the unity of a common intellectual life. While our world is infinitely larger and more complex than Aristotle's, it is also more compact and more easily surveyed.

* * *

Armed with this knowledge and these tools, and living in an intellectual environment so much more homogeneous than any the world has thus far known, why should we not confidently approach our task of building a new synthesis? The overshadowing need of our generation is for an organizing intelligence dedicated to the advancement of the common good. We need brains of synthetic capacity. We need a planetary consciousness. We need ability to think on a terrestrial scale and plan in world terms. We need an Aristotle.

And what is the giant task that awaits this new intelligence, this encyclopædic brain? It is briefly this: to take stock of our planetary resources in the interest of a higher quality of life; to develop the method by which the population of the globe can best be sustained in health, comfort, and dignity; in other words, to organize the world for better advantage of the race. Expressed in these

general terms, or in any kind of terms, this task is obviously too great for a single brain. The world is now too vast and too complex to be grasped by a single philosopher. Even the mind of a Herbert Spencer was unequal to it. When Aristotle comes again, it will be in the form of collective intelligence, the sustained thinking of many minds driving toward a common goal.

I realize that the general terms in which I have described this common goal may cause the project to appear somewhat indefinite. Let us see if we can find a concrete expression of our thought. Let us take, for example, the matter of the world's food. On the surface of the earth there are today living one billion, seven hundred and fifty million people. We know precisely the quantity of food necessary for this vast population. That is one of the additions to our knowledge which the new science of statistics has given us. We know, moreover, where this food is grown and raised. We know the quantity of food exports and imports for each of the sixty-five nations of the world. We know the primary and secondary sources of supply for particular countries. We know, for example, the amount of wheat that Germany would ordinarily import from Russia, and

Russia failing as a granary, the amount that has to come from the United States or the Argentine. We know the dependency of the United States upon other nations for coffee, tea, cocoa, sugar, and many other products, and the dependency of other nations upon us for wheat and beef. In other words, through modern statistics we are able, in our generation, to get a complete picture of supply and demand in relation to the world's food.

And yet is it an orderly process that we see? Is it a process that has been worked out to obtain a maximum of benefit for the human race and a minimum of suffering and waste? Has organizing intelligence been applied on a world-wide basis to the production and distribution of food? The question answers itself. In spite of all our knowledge, this essential phase of the world's work is a chaos, a haphazard, drifting arrangement in which sheer chance plays far too prominent a part. As if natural hazards like crop failures or animal diseases were not enough, the human race adds to its own confusion by tariff wars and discriminatory regulations and cutthroat competition and a hundred other exhibitions of international folly. Consequently, part of the world is hungry while the rest of the world has food in

quantity. Eastern Europe starves while the farmers of our Middle West burn their corn for fuel. Asia is underfed while North America hunts a market.

Here is a vast problem that is calling for the organizing intelligence of mankind. The field has been surveyed and the factors are known. What we need now is synthetic thinking, constructive brains, a plan, laid down in world terms, that will disentangle and weave together in a common system the complex details of our present arrangement.

* * *

Let us use another illustration. As unhappy and unscientific as our distribution of food is our distribution of raw materials. Here is a problem of far-reaching and critical importance. It has been the shadowy cause of most modern wars. It lurks like a Nemesis on all possible roads that lead to world peace. For modern civilization rests, as we have seen, upon an industrial basis, and industrialism in a nation means energy resources and a control of adequate supplies of essential raw materials. There must be coal and petroleum and water power to drive the machinery; and

there must be iron and copper and sulphur and rubber and a hundred other commodities which the machinery transforms into finished product. This is the way the world lives at the present time; this is how it is able to support a population that in only a hundred years has leaped to its present staggering total from a figure half the size.

Consequently, the world is split apart by rivalries, increasingly bitter and determined, as nations reach with hungry fingers for raw materials. This is the underlying factor in boundary disputes. This is what took Japan into Korea. It led England into South Africa and India, and the United States into Alaska and the Philippine Islands and Porto Rico. It has produced our whole modern system of colonies and spheres of influence and special guarantees. It is the motive behind discriminatory tariffs, and favoured-nation clauses, and government embargoes. It creates monopolies protected by bayonets and battleships, so that the world is at the mercy of Germany for its potash, of Spain for its quicksilver, of Japan for its camphor, of Great Britain for its phosphates. In brief, the world is organized like a jungle in which the animals snarl and fight over the bones.

The amazing part of this whole picture is its

utter unintelligence, the complete lack of any idea or plan for marshalling the raw materials of the world for the benefit of the race. It is not as if there had been no analysis of the situation. We know the problem thoroughly. We know what raw materials there are, where they are located, and in what quantity. We know the needs of each nation. What is required now is organizing intelligence, synthetic thinking on a terrestrial scale, a plan of common relationship to the means of life prepared not in terms of a parish or of a nation, but of the globe.

* * *

In this way it would be possible to consider illustration after illustration of the outstanding need in the world for organizing intelligence. There is, for example, the problem of war which threatens the future with ominous clouds. It is written like a giant question mark across the whole face of our civilization. It cuts athwart the hopes and prayers of the race. It makes our planet, which might be so "moon-lit and dream visited," a blood-drenched world, a thing of horror sailing through space. Is it idle to believe that this spectre will yield to the intelligence of mankind? Can we

not suppress it with sanity and organized self-control? Is there not some process by which, through common counsel and regularized contacts, the authority of law can be substituted for the authority of force, and the little ambitions and loyalties of men merged into a larger patriotism?

Another illustration of the need of organizing intelligence may be found in the problem of population. The fertile portions of temperate Asia and the major part of Europe are already overpopulated when measured by the present standard of agriculture. Their food requirements in excess of their own production are supplied by exports from the Western Hemisphere and Australia. But North America is now entering the stage where the exportation of food will no longer be possible. What we produce we shall need for our own increasing population. Here in the United States, at the present rate of increase, we shall have by the end of the century one third more people than there are in China to-day, living on a land area about one fourth smaller. What is true of the United States is rapidly becoming true in South America and Australia. In other words, as Professor East of Harvard points out, within half a century every country in the world must prepare

to live on the fruits of its own agriculture. It must adjust a rapidly diminishing food reserve to a swiftly increasing population. Unless, therefore, modern science can revolutionize the production of food through synthetic methods, we shall hand down to our children a world in which the struggle for the bare physical means of existence will be infinitely more cruel and bitter than anything we know to-day.

Is this a problem that can be mastered by the intelligence of mankind? Or are we merely the apathetic victims of forces we cannot control? With all our new knowledge, is it our doom to sit supinely and helplessly in this temporary lull before the approaching crash of civilizations —of populations, rather—driven by hunger, competing for the mere occupancy of the earth? Can the conscious effort of men in any way steer this biological evolution? Is it not possible to adjust the size of population to fit the world's resources so that those who inhabit the earth can do so in seemliness and dignity? Can we shift the emphasis from quantity of human life to quality of human life? Can the science of eugenics reshape a process that is tumbling with such gigantic

forces? Can the power of man's intellect make this world a worthy and beautiful home to live in instead of a place to fight and freeze and starve in?

* * *

It is probable that these questions sound somewhat Utopian. "What is the use," it will be asked, "of discussing matters which lie so far beyond the boundaries of immediate probability? Why interest yourself in situations which have little relation to the present day life of man living in this kind of world? Why not face facts as they are and make the best of conditions which we have inherited from the past and which are not easily changed?"

In self-defense, let me hasten to disclaim any illusions as to the speed or ease with which mankind can alter its way of life. There is no royal road to the millennium, no short cut to the Promised Land. But is it preposterous to believe that man's intelligence, consciously set to the task, can be made a guide to a far more rational order? There is more power in organized thinking toward a particular goal than many of us dream. The transcontinental telephone was not the prod-

uct of a sudden flash of genius nor the gift of happy accident. It was a task definitely set to mathematicians and physicists. The discovery of insulin for diabetes and of a vaccine and serum for yellow fever did not come by chance. They were deliberately planned for over months and years of research. So in this infinitely larger field of human relationships we need technicians of persisting faith to achieve the miracle—social engineers with a capacity for sustained thinking.

Moreover when we speak of creative intelligence, of programmes drawn on a planetary scale, of proposals that embrace the common good of the whole human race, we are not speaking of something utterly new under the sun. We are speaking of a technique which, while it is historically recent, has already been tried out in many fields. Mankind has already begun to see the possibilities of wide coöperation in effecting certain common ends. The Universal Postal Union, created in 1878, substituted for the chaos of conflicting rates and routes systematized arrangements which now bind together the whole letter-writing world. The International Bureau of Weights and Measures, formed by treaty in 1875, has given us

definitions by which the gram carries the same significance in Paris and Tahiti, and the meter means the same thing in Valparaiso and New York. Our method of calculating time from an accepted prime meridian is the result of a world-wide conference held in 1884. Similarly, we have universal conventions in regard to such matters as telegraph codes, submarine cables, collisions of ships, sanitary regulations, and the navigation of harbours and inland waterways. Even such a detail as concert pitch has been standardized by definite treaty, and the music world has been tied together by this mutual understanding. Beginning in the middle of the last century, these multipartite treaties and conventions, dealing with the common interests of mankind, have steadily grown in number. From 1864 to 1914, two hundred and twenty-eight of them had been consummated. In the decade since 1918, new impetus has been given to the movement, and one hundred and sixty-six have been added to the list.[1] The new propinquity which science has wrought in the world is slowly wearing down the old parochialism. Geographical frontiers are giving way under the pressure of wider necessities. The assertion of the absolute

sovereignty of the state has become in our time the supreme anarchy.

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Perhaps it will be said that these treaties and understandings, significant as they seem, are concerned more with the conveniences of mankind than with its vital problems. Men will coöperate when the objective is simple and the path to it is clearly seen; can they coöperate on a world-wide scale in the infinitely complex difficulties of modern life?

We have already mentioned the question of food and raw materials. It seems scarcely conceivable to us to-day that we could ever succeed in ordering the distribution of these commodities in the general interest of all the people living on the globe. Self-interest is so predominant a factor in human life that its manifestations and excesses can hardly be curbed. And yet, do we not recall those tragic days of 1917 and 1918, when a great common peril drew together a large section of the human race? What did we do? We pooled our resources in the interest of a common cause. A so-called Wheat Executive was appointed, made up of representatives of all the Allied nations. Its function was a

simple one: first it ascertained the respective needs of the Allies as regards breadstuffs, and then it ascertained and divided the available supply. The representative of each country presented the minimum cereal needs of his people, tabulating the rate of consumption, the home production, and deficit to be imported. This statement was criticized by the representatives of the other Allies, and a yearly programme of importation for all the Allied countries was outlined. Then the possible sources of supply were examined and apportioned to the programme, and the deficit was shared in common. In other words, where formerly the Allied countries competed with each other for the world's wheat, each on behalf of its own nationals, they now sat down to determine on a coöperative basis how far the wheat at their disposal could be spread. Organizing intelligence took the place of chance and circumstance. Early in the war, wheat from India went through the Mediterranean to England, passing on its way wheat going from the United States to Italy. Under the Wheat Executive, wheat from India stopped at Italy, and the corresponding amount that would have gone from America to Italy went to England.

But it was not alone in relation to foodstuffs that the Allies pooled their resources and coördinated their control. The Allied Maritime Transport Council, formed in February, 1918, took over through its subsidiaries the allocation of the raw materials of the world. Wool, cotton, leather, tobacco, sugar, meats, fats—there was scarcely a commodity in either hemisphere that was not the subject of joint action. When Italy ran desperately short of coal in 1918, it was rushed to her by rail and water. When England needed meats and fats, and France was crying for leather and nitrates, these supplies were immediately shipped. The tonnage of the world was marshalled and allocated to serve humanity in distress. Vision and perspective were substituted for self-interest. The constructive genius of mankind was harnessed to the furtherance of a single cause.

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"But this was war," it will be said. "This represented an expediency born of a great crisis. It had behind it the psychology of desperation, the attitude that comes when nations find themselves in acute circumstances and a deep passion is shared

in common. What works in war will scarcely work in peace."

The objection may have some merit. We cannot be sure. There is little evidence to guide us in this field. We have not fairly tried to determine whether the motivations peculiar to war can be translated to other circumstances. But let us take a further illustration. Let us consider the international fight against disease. Here we have a vivid example of a new planetary intelligence. Through agencies like the International Health Board, a world-wide campaign, directed from a single headquarters, is being waged against many diseases to which mankind is heir. Under the impetus of this attack, yellow fever is disappearing from the face of the globe. It has been hunted out of Mexico and Panama; it has been driven from Cuba, Central America and Peru; and now it has been tracked down to its last lair in Brazil and on the west coast of Africa, where it will shortly be exterminated. Here is a dread disease that twenty-five years ago menaced the Western Hemisphere from Brazil to Washington, D. C., and from Southern Peru to Northern Mexico. Now it is gone. The organizing intelligence of mankind has wiped it out.

Similarly, the campaign against hookworm is being conducted on a wide scale. The menace of this disease threatens more than half the world. Nine hundred million people live in areas of infection. Of the forty million people living in Madras alone it is estimated that thirty-six million are infected. Over a period of ten years the attack against hookworm has gone forward as part of a united programme in more than thirty-five countries and colonies. Starting in our own Southern States, the battle lines were spread to Cuba and the West Indies, to Central and South America, to Siam, the Philippines, and the South Sea Islands, to India and Ceylon, to Australia, and many other points. The battle is still being waged, but the issue is no longer in doubt, and victory is the ultimate outcome of human intelligence that dared to think and plan in international terms.

Another illustration of the application of intelligence on a world-wide scale is found in the developing coöperation of central banks of issue in matters relating to financial equilibrium. Here again the new unity of the world has outgrown parochial considerations. Here, as in the case of yellow fever, there are no valid boundary lines, and the flags and frontiers which proclaim that

we live in a world of sovereign states no longer tell the truth. The unrestricted flow of gold to America, for example, is a financial disease menacing to the countries on both sides of the Atlantic. It not only means depreciated and fluctuating currencies abroad, but it threatens to bring inflation to the United States, while it curtails Europe's capacity to buy this country's products. The extension of special credits overseas by our Federal Reserve authorities, or the purchase of securities in foreign markets, are some of the means employed to control this disease. But these steps are the result of common understandings. They represent a common attack on a world menace. Even so domestic a matter as the raising or lowering of our discount rate is not considered by our Federal Reserve Board without intimate coöperation with the Bank of England, the Bank of France, and half a dozen other banks of issue. All sorts of delicate questions are involved, and there is constant necessity of balancing one evil against another, of making nice adjustments between immediate and ultimate consequences, of considering the currency problem not from the standpoint of the United States alone, or of England alone, but in the light of the advantage and requirements of the race.

Among material things, in matters that relate to currency and credit, the drift is toward internationalism. The world-wide necessities of our fiscal system tell in favour of the Great Society.

One further illustration of the new technique deserves brief mention. No consideration of the necessity of thinking in world terms would be complete which did not include the new advances toward this goal which are being attempted at Geneva. Here at last we have a parliament of nations, a confederation of the world, in which, however timid and faulty may be the beginnings, the common interests of humanity are the subject of common counsel. Here we have an international clearing house for problems that cannot be confined within national boundaries, centralized machinery for undertaking responsibilities which no single nation can assume. Fifty-six nations, representing seven eighths of the civilized world, are meeting together around a table to see how far coöperation and mutual agreement can be substituted for suspicion and force.

The supreme fact about this new experiment of the League of Nations is that it represents the application of intelligence on a world-wide basis to the jumble of human relationships. It is a stu-

pendous piece of social engineering, conceived in planetary terms. With all its imperfections, it nevertheless is furnishing the machinery for common action in the vast complex problems that are fast overflowing the boundaries of nations.

Upon the development of this sort of experiment depends the kind of life that we shall pass on to the next generations. These humble beginnings at Geneva and elsewhere are fraught with infinite consequences. If man can sit down in this deliberate fashion to rationalize his relations with his fellows, if he can thus be the conscious designer of his own institutions, if he can stretch his mind to cover not his city alone, nor his state, nor his nation, but the globe on which he lives, then this elbowing, snarling present will give way to a future immeasurably vaster and saner than we dream.

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I trust I have not given the impression that the millennium lies just around the corner, or that the path to it is fairly well marked out. It is not a simple task that confronts us. Old traditions die hard, and the habits and thoughts of mankind are not easily turned into new channels. One supreme

obstacle to progress remains as yet unconquered. It is the tribal vanity of nationalism, the catchwords and hallucinations by which fear and rivalry over wide areas are stimulated and maintained. It is collective egotism, dividing the virtue and vice of the world along geographical lines. It is aggressive patriotism, cloaked in ignorance and prejudice, and perverted to selfish ends. The world has had far too much of this and has drunk the cup of its bitter consequences. Until the spread of this social disease is checked, there can be scant hope of a new order.

And yet beneath the surface the tides of fresh forces are running with irresistible strength. We are living in a revolution, in the midst of changes too immediate and too complex to be accurately surveyed or even understood. With one titanic stroke, modern science has obliterated the world of our fathers' generation; and the human race, obeying the same stern principle that governs the survival of all living species, is trying desperately and in part blindly to adapt itself to its new environment as a condition of escape from death. This vital adjustment is one in which this generation will participate. In so far as the process is controllable, ours will be the hands to guide it.

It is precisely at this point, in this focus of change, that the creative, organizing intelligence of men can be substituted for blind chance. It is here that mastery can take the place of drift, that a consciously planned control can shape and mould the operation of natural forces.

What we need supremely at this time, therefore, is something of the synthetic vision of Aristotle, an ability to break over the boundaries of parochialism and think in world terms, a willingness to plan constructively on the basis of larger loyalties. This is the only road to salvation. This is where the judgment and common sense of the race would lead us.

* * *

It may be said that we have given an exaggerated picture of the power of intelligence to effect results. "Humanity is moved by its emotions," it will be claimed, "and the springs of action lie deep in the hearts of men. What is wanted is not a programme but a motive power to put it into effect—a new interpretation of religion which shall sweep the world and snatch us out of our devotion to self and our narrow class interests."

There is no quarrel with this view. It has un-

doubted merit. But it would seem as if first of all we needed a vision, a synthesis, a programme conceived in terms of the common good, behind which we might marshal the driving force of an awakened world. The curse of man has been his aimlessness, his paucity of ideas in regard to his own career, his disbelief in his own powers to shape his future. Let us have a plan, a chart, an objective. Let us determine where we want to go and the best methods of advance. Let the surveyors and engineers stake out the boundaries of the new homestead and map the roads. And then, with the promise of the new land beckoning ahead, humanity can strike its tents and once more take up the march.

Four hundred years ago Galileo shook the world with a question that could well be the watchword of our own generation: "Who is willing to set limits to the human intellect?" All about us today the world is astir. The air is filled with movement and change. Man is breaking out of the bleak wilderness of age-long isolation. He is riding forth to win his right to inherit the earth. He has challenged the blind forces of nature with the organizing power of his own intelligence. Who is willing to set limits to his accomplishment?

Chapter VII

THE NEW TECHNIQUE IN INTERNATIONAL RELATIONS

> "There is no harm in anybody thinking that Christ is in bread. The harm is in the expectation that He is in gunpowder."
>
> —RUSKIN.

ON a recent day in April, the New York Wholesale market received, among other supplies of the kind, 800 crates of honeydew melons from South Africa, 4,000 crates of vegetables and a shipment of lima beans from Cuba, 10,000 packages of vegetables and 1,700 barrels of potatoes from Bermuda, 4,000 crates of onions from Chile, and 18,000 bags of onions from Egypt. In a single year, the United States imported 7,000,000 pounds of butter from Denmark, 4,000,000 pounds from New Zealand, and 3,000,000 pounds each from Argentina and Canada.

It is items like these, appearing casually on the market pages of our newspapers, that drive home the fact, so little understood, that we are living in an utterly new world. Our grandfathers did not import butter or vegetables. What butter they used they made themselves, and their vegetables were home grown. In 1786, a citizen of Massachusetts wrote a pamphlet telling just how he supported his family. With the wheat and corn that grew in his fields he furnished the family bread. The chickens, pigs, sheep, and an occasional cow that he slaughtered furnished the meat. His garden provided all his vegetables and his orchard all his fruits, many of which were dried for winter use. His sugar came from the maple trees. For clothing, his wife spun the wool which he sheared from the sheep; and the flax that grew in the corner of the field was made into linen. The skin of his cattle was tanned and made into the family's shoes. The trees from his wood lot furnished the boards to build his house, the logs for his fire, and the rails for his fences. He had his own forge where he made his tools and nails. Only a few things were needed from the outside world, such as salt, pepper, a little lead and gunpowder, and iron for his forge. These outside products cost

him altogether ten dollars a year, permitting him to save $150 out of the $160 received for the wheat and cattle that he sold.[1]

But those days have passed into the limbo of forgotten things. The world in which we now live, thanks to the contributions of modern science, is a world of specialized and dependent parts knit together in a common unity. Although some of our political leaders do not seem to know it, the era of American isolation was definitely ended when the era of machinery was born. From the time an American citizen rises in the morning until he goes to bed at night he is surrounded with the products of foreign countries. His linen comes from Ireland, his necktie from Japan, his suit of Australasian wool is padded with jute from India. The buttons on his clothes come from South America, France, or the Philippine Islands. The bristles of his hairbrush are from China, his toothbrush is from Japan. He cannot even wash his hands without calling on help from abroad. He sits down to a breakfast of grapefruit, coffee, sugar, and perhaps sausages—all of which are, in whole or in part, the products of foreign countries. His newspaper is made of Canadian wood pulp. He puts on a felt hat that comes from an Austra-

lian rabbitskin. The doormat at his front door comes from India. The nickel that he pays for his street-car fare was mined in Canada. The tires of his automobile come from the rubber plantations of the Dutch East Indies. His briar pipe comes from France. Even the locomotive that pulls his train cannot be manufactured without imported materials: the manganese comes from the Caucasus, the chrome from New Caledonia in the Southern Pacific, the vanadium from Peru. There is more of common interest and interdependence between the United States and China, or between England and Ceylon, than existed a hundred years ago between the states of our Union.

Senator Reed of Missouri, in a recent argument against the World Court, drew a comparison between "this newfangled doctrine of internationalism" and leprosy. "Our policy," he said, "has been to guard ourselves against its contamination by keeping away from leprosy-infected districts and colonies, and by guarding our gates against the entrance of its victims." Quite apart from Mr. Reed's incapacity to realize what time it is in the history of the world, his figure of speech was singularly infelicitous. For in the new era of transportation in which we live even diseases are no

longer the property of particular countries. They cannot be isolated behind racial barricades or stopped by shotgun quarantines. Like raw materials, they go wherever man goes. The bubonic plague from its base in northern Arabia creeps northeast into Tibet, out of Tibet into southern China, up the Chinese coast to the Chinese ports, where it reaches out long tentacles to menace the rest of the world. The influenza epidemic of 1918 started in the German prison camps; it leaped over into Spain; it crossed the Pyrenees Mountains, growing in virulency as it advanced; it jumped the English Channel to Great Britain; it swept over the Atlantic, burned its way across the Western Hemisphere, took the Pacific at a single bound and laid waste all of Asia and the South Sea Islands. It destroyed more lives than were lost during the entire war in Europe. Modern transportation carried the disease from the Eskimos of the Arctic Circle to the savages of the Solomon Islands. No race and no tribe escaped. All were caught in the meshwork with which modern science has woven the world into a single community. To talk as Senator Reed does about "the teachings of Washington" and "the traditional nationalistic policies of Hamilton and Jefferson"

is like talking of the inviolable principles of the Druids or the binding force of mediæval scholasticism. Between Washington's day and our own the world has lived through the mightiest revolution that ever swept across the path of human history, and no pronunciamentos or pious hopes or political legerdemain can bring that day back to us again. The time has passed when any one nation can live unto itself. It cannot even die unto itself, for the whole world would then be chained to a body of death from which mortal infection would flow to the rest. For better or for worse the human race has drawn together in a new unity. There are no chosen people and there is no special salvation. No longer is the world a world merely of Greeks and barbarians. Nations to-day are roped like Alpine climbers crossing a glacier: they survive or perish together.

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It is this new element of propinquity in modern civilization, this new integration of human life, that has made the League of Nations an inevitable development. If the nations of the world are to live on each other's doorsteps, if they must rely on each other for the sheer means of existence, if they

must face the same perils, then we must have some centralized mechanism, some established procedure, by which we can determine the understandings and rules of the common life. The progressive development of organization, of institutions to promote amicable relations among men, is what we mean by civilization. Spreading from the family to the village, from the village to the state, from the state to the nation, the machinery of social contact has been elaborated and widened over countless centuries. The time has come for further extension—not on an informal basis, for informal understandings in this field are no more applicable to our present situation than informal understandings between villages would be in the larger unit of the state. The nations of the world need a systematized method of contact, definite machinery for adjusting their relationships to each other. Nations and civilizations survive only as they succeed in adapting their institutions to the changes brought about by their own inventions.

The League of Nations was foreshadowed from the day that Robert Fulton ran his steamboat, the *Clermont,* up the Hudson River, and George Stephenson induced the projectors of the Stockton and Darlington Railroad to substitute steam for

horses. There were many causes for the failure of the Holy Alliance to which the nations of Europe signed their names in 1815; perhaps the most compelling was the fact that there was no real reason for the Alliance. There were no railroads, no automobiles, no airplanes, no steamships, no cable lines, to draw the world together in a welter of tangled relationships. The Holy Alliance began merely as an emotion. It ended because it had nothing legitimate to do.

The League of Nations was born of sheer necessity. If the catastrophe of 1914 had not brought it into existence, sooner or later it would have come by other means. If this league fails, another league is inevitable. The organization at Geneva sprang from that definite sense of the interdependence of modern nations, which was growing before the war and which was sharpened into keen anxiety by that tragic experience. It is the logical outcome of the mechanical development of the Nineteenth Century, the natural next step in the political evolution of our time. On the theory that if the nations of the world can get together for discussion around a common table, many of the conflicts of interest and misunderstandings of purpose can be reconciled and smoothed away, and many

of the outstanding problems which confront all nations alike can be overcome, the League has built up machinery for international conference such as no previous generation has possessed.

To realize the significance of this transformation, one has only to compare the record of the years since 1920 with the aspirations in men's minds during the decade preceding the war. From 1904 to 1914 the most that anyone dared to hope for was a continuation of the periodic conferences at The Hague. It was not that anyone expected such conferences to grapple with the most significant problems of current international life. It was not that anyone anticipated substantial progress toward ridding the world of war. But many men, both here and abroad, were earnestly convinced that a conference of the powers every eight or ten years would in time yield some good results. And it is true that the first Hague Conference did build at least the scaffolding for the pacific settlement of disputes, while the second Hague Conference reached its high-water mark in a declaration that compulsory arbitration was desirable in principle. A third conference might have gone still further, giving the world, perhaps, an international prize court.

But in the years that have elapsed since 1920, we seem to have leaped a whole century beyond the Hague Conferences. What we have done is to establish the conference method as an international habit. The principle of periodic meetings has been definitely accepted. In each of the years since 1920, an international conference has assembled at Geneva with more nations represented than were gathered together at either of the Hague Conferences of 1899 and 1907. In each of these years, too, the Council of the League, consisting of fifteen nations, has met at least every three months and sometimes oftener. In this brief period, too, a steady succession of international bodies and committees has met under the auspices of the League, dealing with many kinds of human problems. A passport conference, attended by twenty-two nations, was called by the League in 1920 to promote the expedition of international travel. Forty-three nations met in Barcelona in 1921 to discuss problems relating to communications and transit, and to clear the channels of international business. Thirty-five nations came together in Brussels in 1920 to consider the international financial situation. In Geneva, in 1921, thirty nations conferred on methods of suppressing the

international traffic in women and girls. In Warsaw, in 1922, twenty-seven nations considered ways and means of dealing with the international menace of the typhus epidemic. In 1923 thirty-two nations took part in a conference in Geneva to simplify the formalities of customs procedure. In the same year, forty-one nations met in Geneva to discuss the complex problems of international communications and transit, with particular reference to railways, maritime ports, the transmission of electric power, and the utilization of hydraulic power in frontier water courses. In 1924 sixteen powers participated in a conference called by the League at Rome to discuss the extension of the principles of the Washington disarmament treaty to states not signatory to that treaty, whether members of the League or not. In 1925 forty-four nations were represented in the conference on the control of traffic in arms and munitions. The years 1926 and 1927 exceeded in the number of these conferences the five years that had gone before.

In addition to these more formal gatherings, the League has promoted a steady succession of conferences and committee meetings to deal with a great variety of problems, such as the standardiza-

tion of international statistics, the suppression of the international traffic in opium, the unification of standards of anitoxic serums, the feeding of Russian refugees, the return of prisoners of war, the reduction of armaments, the private manufacture of arms, the deportation of women and children in Asia Minor, the abuses of double taxation, and a score of other topics which represent the legitimate concern not of one nation, but of the family of nations.

In brief, the spasmodic employment before 1914 of the conference method of handling international interests has given way to a general acceptance of this new technique. What we did in 1787 in broadening and regularizing the scope of social contact in our own country is now being done on a far wider scale.

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The League's emphasis upon conference has a further significance. Much of the machinery which it has built to promote this activity is permanent. The Assembly, the Council, and the Secretariat represent a method of continuous international conference on any problem that may arise, as opposed to *ad hoc* conferences called to consider

specific matters. In other words, while the League has initiated a variety of special international conferences on topics relating to its work, it has also, through its permanent machinery, the capacity to focus immediate attention on any difficulty that can unexpectedly threaten the peace of the world.

This is a point of no small importance. Special conferences like those held in Washington in 1922 have their legitimate and proper place in the regulation of the world's affairs. Their attention, however, is necessarily limited to the specific purposes for which they were called; when their business is concluded they adjourn, and there is no interim machinery to carry forward on a satisfactory basis the proposals or conclusions which they have reached. They create no organic, continuing relationships. This type of conference may prove helpful when directed to a single problem, but it fails the world in time of unexpected crisis.

For *ad hoc* conferences are not easily or quickly called together. The date, the place, the membership, and the agenda must be agreed upon in advance. The first Hague Conference was not ready until nine months after the Czar's call. More than two years elapsed between President Roosevelt's appeal for the second Hague Conference and its

opening session. Although only nine powers met at the Washington Conference, it took four months of preparation before the first meeting could be held. On the other hand, when the Greco-Bulgarian dispute developed in 1925, the Council of the League met in two days, some of the members coming by airplane. No special arrangements were necessary, no protracted negotiations to determine which nations should or should not be included or what the diplomatic procedure should be. The machinery was already set up, and it met the emergency swiftly and decisively, stamping out the fire before it could spread.

There is apparently some opinion in America that a succession of special conferences like the one held at Washington could adequately take the place of the League. To such belief it would seem as if memory of the plight of Sir Edward Grey in July, 1914, would be a crushing answer. The pistol shot at Sarajevo found mankind utterly unprepared. There was no machinery of arbitration, no regular method of conference. The inchoate panel of judges at The Hague was all that the ingenuity and good-will of mankind had been able to create to avoid international disaster. In vain Serbia tried to get her case considered by

some tribunal of the nations, but there was none, and in that pitch of flame and heat nothing could be devised. In vain Sir Edward Grey sought for a conference, trying to invent the necessary machinery that would bring the nations concerned around a common table. But it was too late; there were no precedents for such a step; no rules for such procedure had ever been laid down; and in those few frantic days new expedients could not be extemporized. The catastrophe in which twelve million men were sacrificed, and millions more were crippled and maimed, began without a single conference. A handful of hasty, misunderstood telegrams plunged the world into the greatest tragedy ever visited upon the human race.

That is why some kind of permanent machinery is necessary, some international organization ready for emergency. That is why the Assembly, the Council, and the Court of International Justice constitute the outstanding features of the League's programme. They represent preparedness. They represent a flexible mechanism that can be quickly adapted to unexpected situations. More than that, they represent constant collaboration in the study and solution of problems which, if neglected, will,

like a tumorous growth, prove inoperable when too late the physicians are brought together.

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Judged by the slow process of evolution, 1914 is ages back. It is difficult to think of the world as it was then. "Let us imagine a business," says Abraham Flexner, "with various departments whose heads do not for the most part confer until bankruptcy threatens. Very rarely would such eleventh-hour conference avert catastrophe. Yet thus has hitherto the business of the world been mainly conducted! Each department—in this instance, a nation—has been pursuing its own course, not only without regard for or conference with other departments (nations), but usually with the purpose of obtaining for itself some advantage at some other department's expense. Then, when the plight of the world business has become hopelessly entangled, when interests have been created, pride wounded, passions aroused, and force mobilized—then the departmental heads have been hastily assembled, amid protestations of peaceful and honorable intention, to bring about concerted action for the purpose of avoiding bankruptcy. Too late! The machinery of coöperation improvised

in such a state of mind—national and international —rarely functions." [2]

For the first time in history, the nations have now established a central office where the departmental heads meet at regular intervals to discuss the firm's affairs. They sit around a table trying to envisage the problems that confront them all as members of a group rather than as individuals. To be sure, every departmental head is representative of his own department (i. e., nation). It must be so; were it otherwise, he would carry no weight at home. Things might have gone more smoothly if the firm (League) had been organized to start a new business. But unfortunately the firm inherited a bankrupt and embittered business; every department (nation) was under necessity of getting on its feet and under circumstances which involved stepping on someone else's toes. None the less, the organization was accomplished. The League of Nations was formed. The responsible heads now meet regularly in the open.

Such is the League of Nations—primarily a Board of Directors' Room, where the representatives of nations gather at definite intervals to discuss problems and to take such steps as can be

agreed upon, looking to amelioration, adjustment, or solution.

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One who is doubtful about the operation and effectiveness of this new technique should visit Geneva. There he could see for himself that with all its frailties and imperfections the League is as certainly and securely an international fact as aviation or any other means of promoting a wider intercourse. There he could walk through the rooms of the Secretariat building where international groups and committees are meeting to consider a great variety of matters of intimate concern to the whole human race. In these groups are gathered the representatives of forty or more nations, each contributing his point of view to the common discussion. Italians are talking across the table to Greeks and Slavs; Englishmen and Chileans and Chinese are working out the details of some new understanding; Australians and Danes and Siamese and Cubans are arguing the merits of a proposed convention—and adjourning for dinner at the end of the day to continue the discussion over a friendly board.

There has never been anything like it in history.

All sorts of subjects of international interest have been up—not necessarily for settlement, for the League is not a cure-all for human difficulties—but for discussion. "Give me an opportunity to discuss with my neighbour a difficulty between us," said Voltaire, "and I shall be more than half-way toward composing it." Indeed, it is this element of joint discussion, of common deliberation, that distinguishes the new technique from the older diplomatic method. In one of his recent addresses, Mr. Elihu Root has referred to the significance of this distinction: the revolutionary change in practice and procedure that was wrought when, in place of diplomatic notes and memoranda and all the shopworn paraphernalia of foreign-office routine, the world began to employ the town-meeting idea, the system of open conference, with the entire family of nations participating in the discussion. Not that foreign offices and diplomatic representatives have been discarded and the new technique substituted for the old; the vital point is that at Geneva a new experiment in method is being tried out, and that slowly and painfully it is winning its way—winning its way because, in spite of setbacks and breakdowns, it seems to promise more in effective-

ness and positive results than the older system which it now supplements and which in time it may partially supplant.

As to why this new technique should succeed where diplomacy fails several reasons could be advanced. In the first place, the new method centres around open discussion with the cards of all nations face up on the table for the world to see. It makes conferences behind closed doors and secret understandings not impossible, but more difficult. With many nations to be considered, confidential agreements between two or three are not so easy to consummate or enforce. Nations which, because of size or inferior military status, might be threatened or coerced now have a platform from which they can shout their apprehensions and grievances to the ends of the earth. Consequently, the larger nations are inclined to walk with caution, for aggression is difficult to explain in open conference. Talleyrand or Metternich would have an unhappy time in the League's Assembly.

In the second place, the new method brings in everybody, the small nations as well as the large, those that are intimately concerned in the solution to be reached and those that can approach the

problem from more or less detached and disinterested standpoints. This is a factor of immense significance. In not a few cases in the last three or four years the influence of half a dozen states that had nothing to gain from the decisions except a greater promise of world peace has succeeded in bringing together in common understandings a group of antagonistic powers. Countries like Switzerland and Sweden and Czecho-Slovakia have been the solvent in clearing away menacing difficulties. They have been able to bring to the council table an element of reasonableness and detachment and persuasion that has cut through the jealousy and self-interest of suspicious nations with nerves on edge. Deprived of the assistance of this impersonal, friendly interposition, the old order with its exchange of diplomatic notes and its ultimatums cannot hope to compete in terms of real results with the newer technique.

Again, the conference method is superior because it affords an opportunity for the development and operation of an international public opinion. In all the difficulties which the League has thus far succeeded in reconciling, its sole sanction and authority have been moral force. In the Aaland Islands dispute, in the Albanian boundary

difficulty, in Memel, in the raid of Greece on Bulgaria, Geneva had no army or navy and no hint of one. Its decisions represented the collective conscience of the world, backed only by public opinion. Public opinion is by no means a novel force even in international questions, but never before has the world had an instrument by which that force could be focussed upon a particular difficulty. The League is the instrument. Its victories are gained not by arms but by concentration of world opinion. If in the future it helps to maintain peace, it will not be because it represents an overwhelming combination of military force, but because by slow stages it succeeds in gathering up the moral judgments of mankind in one powerful shaft of light and bringing that light to bear on instances of international injustice.

Finally, this new technique makes possible the introduction of the expert to international difficulties in a way that the old method could not hope to do. The importance of this innovation can scarcely be overemphasized. For international life has reached a stage where its technical problems can be met only by scientific study. Questions like the transportation of hydro-electric power across boundary lines, or the financial re-

habilitation of Austria and Hungary, or the double taxation of foreigners, cannot be settled by the amiable resolutions of diplomatic representatives. They require the best brains obtainable, and it is in its capacity to mobilize these brains on difficult technical international problems that the League has made a distinct contribution to the better ordering of modern life.

For example, when the League undertook to study the question of the double taxation of foreigners in both their country of origin and of residence, it created a committee consisting of such men as Professor Seligman of Columbia University, Sir Josiah Stamp, Dr. Bruins and Professor Einaudi. The technical committees on communications and transit include men like Bignami, the Italian engineer, Lankas, the director of railways in Czecho-Slovakia, and Tsang-Ou, the director of the Chinese state railways. On the Committee on Intellectual Coöperation have been such well-known men and women as Henri Bergson, Mme. Curie, Albert Einstein, Gilbert Murray, and Robert Andrews Millikan. Charles P. Howland of New York was brought over to head the work which the League is doing to settle a million refugees on Greek soil; associated with him was a

small group of the ablest engineers and bankers of Europe. Men like Ciraola of Italy, ter Meulen of Holland, Rappard of Switzerland, Nansen of Norway—and scores of others who in justice should be mentioned in the same list—are working on a dozen different problems which relate, in many of their aspects, not to Spaniards or Englishmen or Swedes, but to human beings, occupying the same planet, fighting the same enemies of disease and hunger, desperately trying to maintain for themselves and their children an ordered life.

* * *

This, then, is what the League is. It is a new technique for handling international affairs. It is a better way of doing business. It is a means of getting people together. It is a parliament of persuasion. It is an agency for conference and consultation. It is a machinery to promote consent. It is a method of international life.

And all this business about double taxation and the settlement of Greek refugees, how does this relate to the one great problem that hangs like the sword of Damocles over the human race—the problem of war? What reason is there to expect

that all these miscellaneous meetings and conferences can help ward off another and perhaps a final cataclysm?

The answer to this challenging question is perhaps more obvious than it seems. Geneva is developing new habits. It is digging new channels of thought and establishing a fresh method of approach. In a hundred different ways, through the consideration of all sorts of unrelated but common problems, the nations in the League are learning the technique of teamwork. They are learning what it means to play ball together. Through practice with less important issues, they are beginning slowly to see that when men get together about a table, thorny historic situations and pressing international difficulties often yield more fairly and more sensibly to conciliation and compromise than to nationalistic or obscurantist claims. The hope of the situation lies at this point: with this habit of teamwork more thoroughly interwoven into the life of the world, with the technique of coöperation more completely understood, perhaps when the next great test comes, and another 1914 throws down its ugly challenge to mankind, there will be a better chance

for sanity and self-control and a larger hope of escape from a world wreck of untold proportions.

* * *

It would, of course, be idle to pretend that the League is out of the danger zone, or that it has certain power to control the forces that are working toward violence. In attempting to correct age-long international practices its task is gigantic. It necessarily partakes in some measure of the defects of the old order: except as the spirit and fact of coöperation may raise the ethical level, the League in reality can be no better than the individual governments that compose it. Moreover, its enemies are using every weapon of ridicule and abuse to disarm it of its sole power: the faith of the common people of many nations in its moral authority and claim. Every mistake is hailed as fatal. Every evidence of uncertainty in finding the next step forward is greeted with derision. Here in the United States especially we are tempted to emphasize its errors and to decry with something akin to satisfaction its failure to score a perfect record.

Of course no human institution ever scores such a record. Certainly no new experiment like the

League of Nations can be expected to fulfil the entire promise of its possibilities in the first years of its growth. For the League has no body of tradition behind it, no precedents to guide it. It must feel its way along from case to case, growing through contact with experience. It must be developed step by step, adapting itself to new conditions and new problems. This is the history of all great social and political experiments. None of them has ever sprung full-armed and powerful into a waiting and friendly world. None has ever been born to its maximum strength or has been able immediately to measure up to its full responsibilities.

America of all nations should realize that patience and persistence are essential qualities in any pioneering of this kind, because 140 years ago we launched just such an experiment—an experiment utterly new and untried. For forty years it wobbled rather weakly, to the open satisfaction of its enemies and the constant despair of its friends. If anyone thinks that this statement is an exaggeration, let him read the record of our early days. In 1801 an act of Congress abolished the United States Supreme Court for fourteen months. Said William Plumer of the House of Represen-

tatives: "The judges of the Supreme Court must fall. They are denounced by the Executive as well as by the House. They are obnoxious and unyielding men and why should they remain to awe and embarrass the administration?"[3] The same year witnessed a vicious and determined attack upon the whole federal judiciary system. "I resist every idea of having suits decided by foreigners," wrote Judge Todd of Kentucky to Senator Breckenridge, in opposing the establishment of Federal courts in the several states.[4]

And how did the friends of the Constitution react to this concerted attack? "A vital blow has been struck," said Alexander Hamilton.[5] "They have battered down the great outwork of the Constitution," wrote Gouverneur Morris.[6] "By this vote the Constitution has received a wound it cannot long survive," said the New York *Spectator,*[7] and the Washington *Federalist* lamented: "Farewell to all our greatness. Our Constitution is no more."[8]

It took patience and courage to weather that storm. The experiment was still very new; it still had to prove itself. And in the next three decades, courage and patience were increasingly indispensa-

ble. There was conflict and breakdown, and the air was full of the threat of secession. In 1809 the Governor of Pennsylvania called out the State troops to resist an attempt to enforce a decree of the United States Supreme Court. New York and Massachusetts at different times both refused to recognize the Supreme Court's jurisdiction. Said *The United States Telegraph:* "The Supreme Court has no more right to meddle with our questions than the Court of King's Bench."[9] All of New England was nervously talking of secession. "We are ready for separation," said the Boston *Gazette* in 1808, "if our independence cannot be maintained without it. We know and feel our strength and we will not have our rights destroyed by the mad schemes of a Virginia philosopher."[10]

As late as 1832, the State of Georgia, with the quiet approval of President Jackson, snapped her fingers in the face of the Supreme Court and defied its power. "John Marshall has made his decision," said President Jackson, "now let him enforce it";[11] and newspapers in many quarters expressed astonishment and resentment that "the sovereign State of Georgia" should be "dragged before the bar." Henry Daniel of Kentucky gave

utterance to a sentiment that was more than local when he said: "Nearly every State in the Union has had its sovereignty prostrated, and has been brought to bend beneath the feet of the Federal Tribunal. It is time that the States should prepare for the worst and protect themselves against the assaults of this gigantic court." [12]

Meanwhile, the Supreme Court, defied and insulted, was humiliated and helpless. "Is that in truth any longer a government which is too feeble to execute its laws?" asked the Richmond *Whig*.[13] "The Union is in the most imminent danger of dissolution," John Quincy Adams confided to his diary, "the ship is about to founder." [14] Even John Marshall, the heroic figure who for more than thirty years had led the fight for the federal experiment, gave way to a moment of despair. "I yield slowly and reluctantly," he wrote, "to the conviction that our Constitution cannot last. Our opinions are incompatible with a united government even among ourselves. The Union has been prolonged thus far by miracles. I fear they cannot continue." [15]

The despair of those early days has given way to confidence. Through trial and error we have

found our way to stable foundations. The battle has been won, and while mistakes and miscarriages and occasional breakdowns continue, we face the future with serenity.

The League of Nations must inevitably go through the same process. Step by step it must win its way forward to a surer footing, adapting its machinery and its methods to changing conditions. There will be moments of discouragement and despair. People will jeer at its errors and condemn its faltering progress. But with courage and patience to sustain it, the idea upon which it is based will steadily grow in strength and prestige. Upon it depends perhaps the whole destiny of Western civilization. For what else is there to take its place? What substitute, what alternative, has been proposed? If this technique fails, what chance or hope is there of rationalizing international relations in a world in which the necessities of the race pull one way while human passion and prejudice pull the other? Those who oppose the League of Nations cannot be excused with a mere statement of disbelief; upon them rests the inescapable responsibility of suggesting something better, something more calculated to

bring peace and order out of a welter of tangled interests.

* * *

Riding in an automobile along the Canadian side of the Niagara River, one can visit in a single afternoon four battlefields of the War of 1812: Fort Erie, Chippewa, Lundy's Lane, and Queenstown Heights. With their ancient gravestones and grass-covered earthworks, they have a bewitching beauty, a serenity and charm that breathe of

> Old, unhappy, far-off things,
> And battles long ago.

And yet what depths of human folly they represent! Legalized murder of one's own neighbours on behalf of a cause which was incompletely understood and half-heartedly supported! One's mind travels back to the dreary days when a straggling American army was being bulldozed by its officers to invade Canada across the Niagara River. "Honor and glory await you," read the proclamation of the commanding officer. "You will enter a country that is to be one of the United States. . . . Whatever is booty by the usages of

war you shall have."[16] But the soldiers were reluctant to move. The Canadians were not their enemies. Why should they carry fire and sword against them? They were willing to defend their own country from invasion, but why attack the country of their neighbours? So there were mutiny and court-martial and executions, and finally "morale was restored" and the army crossed the river on its mission of glory. There followed the scenes of horror which inevitably accompany such invasions. Major MacFarland of the Twenty-third United States Infantry, who not long after was killed at Lundy's Lane, wrote to his wife as follows:

"The American militia and Indians plundered and burnt everything. The whole population is against us. . . . On the 19th inst. our militia burnt the village of St. Davids, consisting of 30 or 40 houses. This was done within three miles of our camp, and my battalion was sent to cover the retreat. . . . My God, what a service! I never witnessed such a scene."[17]

To-day, as in 1812, the old savage passions are still uncurbed. Now, as then, "national honour" is the cloak of an immorality that has been outlawed in private life, and inflamed and heated

prejudice passes for patriotism. Now, as then, we are guided by the emotions of the pack, particularly by its instinct for violence. Now, as then, we think of the sword as the ultimate arbiter; we think of force as the instrument by which Right is finally enthroned.

In one respect alone has the scene changed. Modern science has revolutionized, not man, but his world. It has made his old ideas infinitely more dangerous. It has taken away his flintlock musket and his firebrand and given him instead machine guns and poison gas. It has brought him into intimate contact with his neighbours, and exposed him to all the irritations that arise from propinquity. It has extended his field of self-interest so that in the pursuit of happiness and even of life he collides with his fellows on the other side of the globe. But further than this, science has not gone. To man himself it has brought no change. He remains as he was—a creature of passion, with the old fire ablaze in his eyes, fingering the new implements by which his irritation and self-interest can now be expressed in cataclysmic slaughter.

What do we see as we look into the future? Is there sanity enough in the world to handle the

weapons which science is so fast creating? Is there intelligence enough to employ them not for destruction but for the building up of an abundant life for mankind? Is there time enough to develop a technique of tolerance and self-control? What use will the old savage make of his new civilization?

THE END

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